

Comtest Networks



G. Solutions

G.fast & G.hn



The Importance of G. Solutions for the MDU Market in the World Today

In the US alone, there are ~21 million MDU's. These could be large apartment complexes, Senior Living Complexes, Low income housing, etc. , And, of this, about 17 million were built before what could be called the internet age.

In addition, a large percentage of young adults live in some of these large apartment complexes. And, this is the first generation with internet their whole life. And, for this generation, premium HSIA is a must.

All of these MDU's are "target" locations for G. deployment. Unfortunately, these same buildings would be considered legacy Telco build (POTS only) and therefore unless modernized would have 66 blocks or other old, corroded, and noisy POTS connection blocks.

Here at Comtest Networks we are building the solutions to support and allow these G. Solutions to work to their full potential within these older MDU buildings using the wire that already exists.

Comtest Networks (CNI) G. Solution Sets:

The MAQS – Full Solution set for G. Deployments:

The MAQS is a connection block system which consists of a base and combines primary protection & G. 212MHz Splitter all in one module . The MAQS eliminates 40% of traditional cabling and by using our pre-made cables, wire wrap connections from the protection block are eliminated along with the noise they create. The MAQS eliminates crosstalk and noise which is particularly important as frequencies increase to 212Mhz. When using the MAQS, TCO is improved by eliminating several connection points and thereby reducing points of failure and operation costs.

KA1000 & Multiport Combiner:

The KA1000 is a Modular Solution originally designed as a GAM/DPU support box for G. installations (G.fast & G.hn). It simply screws to the backboard in the building terminal and attaches via a standard RJ21 Connector at any MDU building terminal. It is specifically designed for the stringent requirements of G. technology, i.e. 212Mhz.

The G. MULTiport Combiner platform is designed to minimize crosstalk and maximize performance. The platform allows for quick and easy installations at both New Build and for Rehab of old building terminals.

The G. MULTiport combiner provides easy input connectivity from the DPU and existing POTS services via standard RJ21 connectors with a single IDC output to the suite and is specifically designed for the stringent requirements of G. technology to 212Mhz

G. Splitters and EMI Suppressors:

Here at Comtest Networks we have an entire line of G. Splitters for the living or business suite which allows for the existence of G. technologies and POTS (Plain Old Telephone Service) on the same twisted pair of wires within the building walls.

The Comtest G.fast EMI Suppressor is a Common Mode EMI Filter designed and specifically built for G.fast (212Mhz). This dongle will reduce or eliminate the effects of EMI on G. services.

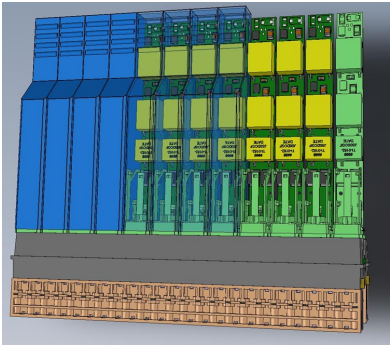
G. Baluns:

Comtest has a wide variety of G. Baluns these are a passive in-line device designed to convert a G.212Mhz signal carried on a balanced twisted pair cable to an unbalanced 75 Ω coax cable (and vice versa). Our Baluns are designed for Telecom equipment rooms, in the home and/or buildings lacking telephone wiring or that have inadequate twisted pair wiring, and provide a method to bring high-speed 212Mhz broadband services into the premises using the existing wiring.

Primary Protection:

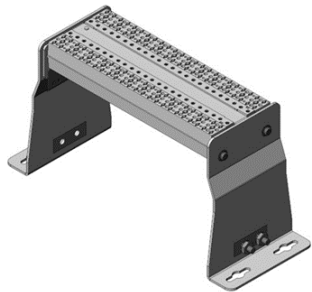
CNI has several advanced primary protection devices for G. Solutions and any primary protection needs.

The MAQS (Multi Application Quick Access Solution)



The Multi Application Quick Access Solution (MAQS) is an integrated G. Technology Splitter and Primary Protection for both POTS in and Combined Line out. The MAQS is the first Primary Distribution block specifically designed for the stringent requirements of G.fast technology, 212MhZ. The MAQS is fully BWC and enables data services to perform as they were intended. The MAQS Improves reliability, stability and data rate, all while reducing points of failure and eliminating noise by at least ~20 dB

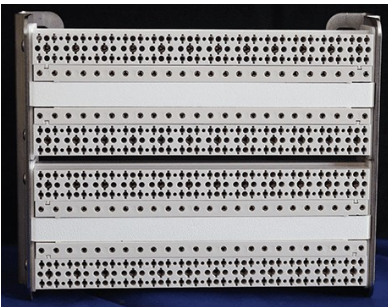
MAQS 24-Port Base, Wall Mount



The Multi Application Quick Access Solution (MAQS) is an integrated G. Fast Splitter and Primary Protection for both POTS in and Combined Line out. The MAQS is the first Primary Distribution block specifically designed for the stringent requirements of G.fast technology, up to 212MhZ

MAQS 24-Port wall mount (for more info please email info@comtestnetworks.com)

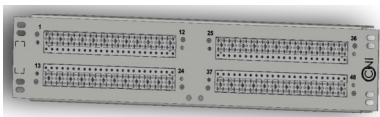
MAQS 48-Port Base Block, Wall Mount



The MAQS Base 48-Port Block can maximize cabinet investment by eliminating the need for forklift replacements at existing FTTC sites as port exhaustion is approaching or when implementing Vectoring. The reduced footprint of the 48-Port Block maximizes performance and data rates while doubling port density and reducing cabling by 40%. It accepts the G.fast Splitter Module, the Single Primary Protection Module and the In-Line Tester Modules.

Additional MAQS Rack Mount Solutions For G.fast/G.hn

48 Port Rack Mount



The MAQS 48-Port Rack Mount is perfect for small to medium size deployment needs in Hospitality Industry where POTS plus G. Services need to co-exist on a single cable pair to the suite. It is also exactly what is needed for small cabinet applications where space is limited. This rack mountable solution reduces footprint of the 48-Port Block MAQS and maximizes performance and data rates while doubling port density

MAQS 48-Port Rack (for more info please email info@comtestnetworks.com)

96 Port Rack Mount



The MAQS 96-Port Rack Mount is perfect for Larger applications in the Hospitality Industry where POTS plus G. Services need to co-exist on a single cable pair to the suite. It is also a great solution for Outside Plant cabinet applications. This rack mountable solution allows for 96 ports of protection feeder In and distribution OUT where traditional methods would need to use 200 pair protection panels. The MAQS maximizes performance, stability and vastly increases data rates while doubling port density

[MAQS 96 Port Rack](#)

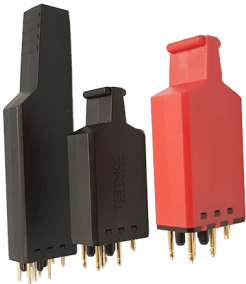
MAQS G.fast Splitter with Dual Primary Protection Module



The MAQS Module provides both Line and POTS primary protection and splitter in one module that offer quick and easy configuration changes. The combination of both GDT and Solid state primary protectors coordinate to offer superior lightning and surge protection. The Splitter is specifically built for the demanding technology of G.fast by maximizing performance and data rates and is also backward compatible to VDSL2 and ADSL.

MAQS G.fast Splitter with Dual Primary Protection Module

MAQS Data Only Primary Protection Module



The MAQS Data Only Primary Protection module is used on services WITH ONLY DATA and provides Gas Tube protection for the LINE only service. The Protection module is easily identifiable with its Black or Red colored case and fits in any position on the 24-port mounting frame.

MAQS Data Only Protection Module, Black Tall housing

MAQS Data Only Protection Module, Black Short housing

MAQS Cable Set



The MAQS Cable set for Attaching/Combines G. Technology, to POTS service and Line for connecting to the business or living suite. One set of cables is required for each 24 G. lines. The cable set includes:

1 G. Header Cable (Equipped with RJ21 Connectors on both ends for G.fast DPU and Breakout Cable for G.hn GAM)



1 POTS Cable, connects to existing or new 66 block or other style connecting block. From Voice source (POTS)



1 LINE Cable, connects to existing or new 66 block or other style connecting block. Interface to living or business suites



The MAQS Quiet Termination Cable for LINE side. This cable is a MAQS LINE cable Terminated on our [CMRA Termination block](#) which will enable the G. technology 212Mhz to perform exactly as intended.

Takes the place of the standard MAQS LINE cable that would terminate onto a 66 block or other style connecting block.

For more info please email info@comtestnetworks.com

G. Solutions Continued

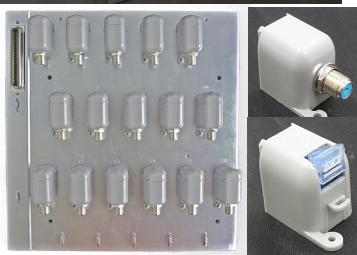
KA-1000 G. Solutions Support Solution



The Comtest Networks KA-1000 platform is designed to minimize crosstalk and maximize performance.

The KA-1000 is a Modular Solution to Support G.fast DPU installation at building terminals and MDU environments by providing easy connectivity to the DPU and/or GAM via a standard RJ21 Connector. The KA-1000 is specifically designed for the stringent requirements of G. technology up to 212Mhz.

The KA1000 provides quick and easy installation with 16 or 25 Baluns. The KA-1000 provides superior performance at both New build or for Rehab of old building Terminals.



G. MULTiport Combiner



The Comtest Networks G.Fast MULTiport Combiner is designed for installation in building terminals and MDU environments as it provides easy input connectivity from the DPU and existing POTS services via standard RJ21 connectors with a single IDC output to the suite. The G.Fast MULTiport Combiner is specifically designed for the stringent requirements of G.fast technology up to 212Mhz and will also work great for VDSL2, Vectoring and even ADSL.

The G.Fast MULTiport Combiner platform is designed to minimize crosstalk and maximize performance. The platform allows for quick and easy installations at both New Build and for Rehab of old building terminals.

G.Multiport Combiner (16 port)

66 Block with RJ21 F



Traditional 66 Block with 1 Female Telco Connection & 89D Wallmount. Although the 66 block is not the best kind of connection point for G. technologies 212Mhz. It does seem to be what many like to use and are OK with the performance loss associated with its use. This 66 Block includes 1 Female Telco Connection and is equipped with 89D wall mount brackets.

CNI PN- BP66-BL-RJF20 (for more info please email info@comtestnetworks.com)

G. Technology In Suite Solutions

G.fast

G. technology is the next generation of broadband service delivered over traditional copper networks. G. technology works at 212MHz and delivers 1000MBits/s. G. technologies offers a more cost effective roll out option than fiber to many MDU environments by allowing the service provider to re-use valuable existing copper twisted pair already in the walls of these MDU buildings. The Comtest Networks G. Splitters and additional support solutions enable the POTS (Plain Old Telephone Service & the high speeds provided with G. of 212Mhz to coexist on the same single copper cable pair.

CPE G.fast Splitter



Our CPE G.fast offers the same high performance and reliability our customers expect from our products. As networks speed up and the microfilters typically used for xDSL connectivity hit their limitations, carriers need alternative, high-bandwidth CPE solutions that take them to their preferred demarcation point.

This G.technology Splitter also includes our [patented secondary surge protection](#). This protects against lightning strikes and power crosses, reducing weather related failures and service calls. Secondly, the splitter offers additional protection of the equipment in the house reducing equipment failure due to surges.

Flush Mount G.fast Splitter



The CNI G. technology Flush Mount Splitter provides all the same benefits as the above CPE solution shown above.

This Splitter mounts conveniently in industry standard electrical boxes, resulting in a compact and clean installation ideal for use in apartments, condos, or homes where there is no NID or space for a standard splitter.

For more info please email info@comtestnetworks.com

NID G.fast Splitter with Test Jack



The G.fast NID is designed for simple and easy clip-in installation in virtually all industry standard NIDs. The Splitter is environmentally sealed against the elements. This, in coordination with the gel filled IDCs, protects against the risk of corrosion or failure caused by nicked wires during stripping. A RJ-11 test jack is provided to validate dial tone on the primary phone line. A feature unique to the NID-01VTJ includes the addition of secondary surge protection, guarding the Splitter against lightning strikes and power crosses. The G.fast NID POTS Splitter is backwards compatible to VDSL and ADSL2+.

G.fast EMI Suppressor Dongle



[The Comtest G.fast EMI Suppressor](#) is a Common Mode EMI Filter designed and specifically built for G.fast (212Mhz). This dongle will reduce or eliminate this noise and can improve throughput of up to 30%. This G. Suppressor provides insertion loss of 30dB of couple signals (Electromagnetic interference signals) without adversely affecting the G.fast signal.

Flush Mount G.fast Balun



The Comtest Networks Flush Mount G.fast baluns provide the perfect in-unit solution for interfacing between coax cabling and the DSL modem or media gateway. The baluns can be installed in any standard telephone outlet for clean and efficient connection. The Comtest G.fast balun is a passive in-line device designed to convert a G.fast signal carried on a balanced twisted pair cable to an unbalanced 75Ω coax cable (and vice versa).

SA-2253-0001

Flush Mount G.fast Balun

Indoor G.fast Baluns



The Comtest Indoor G.fast Balun is a passive in-line device designed to convert a G.fast signal carried on a balanced twisted pair cable to an unbalanced 75 Ω coax cable (and vice versa). G.fast promises to deliver gigabit speeds over short lengths of standard twisted pair Telco cable; this reach can be optimally extended via coax to businesses and MDU environments.

SA-2252-0023-BK

G.fast Balun

SA-2252-0023-WH

G.fast Balun

Universal G.fast Baluns



Comtest Networks has released a G.fast Balun solution specifically designed for longer coax reach. The Comtest G.fast Balun is a passive inline device designed to convert a G.fast signal carried on a balanced twisted pair cable to an unbalanced 75Ω coax cable. G.fast promises to deliver gigabit speeds over standard twisted pair Telco cables.

RPF Pass thru G.fast Balun



The Reverse Power Feed (RPF) G.fast Balun is a passive in-line product that converts a G.fast signal from a balanced twisted pair cable to an unbalanced 75 Ω coax (and vice versa) that allows for the passthrough of remote power. The RPF G.fast Balun is compatible with Reverse Power Feed configurations to allow G.fast to be extended via coax to businesses and MDU environments.

Premise Solutions

Primary Protectors

The Primary Protector is environmentally sealed against the elements and will fit in any standard Subscriber Network Interface enclosure. This, in cooperation with the gel filled IDCs, protect against the risk of corrosion or failure caused by nicked wires during stripping. The GDT (Gas Discharge Tube) is widely accepted as the best in the industry and the addition of Comtest Networks Secondary Surge Protection guards the equipment in the house against lightning strikes and power crosses.

Dual Primary Protector



The Dual Primary Protector is environmentally sealed against the elements. This, in cooperation with the gel filled IDCs, protects against the risk of corrosion or failure caused by nicked wires during stripping. Two set of test points are provided to validate dial tone on the primary and secondary phone lines. A feature unique to the Dual Primary Protector includes the addition of secondary surge protection on each line, guarding the equipment in the house against lightning strikes and power crosses.

SA-4713-0001

Dual Primary Protector

NID Primary Protection Module



This uniquely designed primary protection module is designed to fit into any standard Subscriber Network Interfaces (NID/SNI). It attaches easily and secures to our Comtest NID splitters, the NID01-VTJ and NID01-VTFB and will attach to other Manufacturer splitters if needed. The Comtest Networks Primary Protection Module will connect to either a threaded or Fast-on ground post.

SA-4705-0001

NID Primary Protection Module

Primary Protector with Test Jack



The Primary Protector with Test Jack is environmentally sealed against the elements. This, in cooperation with the gel filled IDCs, protects against the risk of corrosion or failure caused by nicked wires during stripping. An RJ-11 test jack is provided to validate dial tone on the primary phone line. A feature unique to the Primary Protector with Test Jack, is the inclusion of secondary surge protection, guarding the equipment in the customers premise against lightning strikes and power crosses.

SA-4714-0001

Primary Protector with Test Jack

Thank You

**Please Contact us for
additional assistance**

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comtestnetworks.com