



"Results You Can Count On"

Model 600 Switching Matrix Series
Transparent Switching Matrix Modules for
High-Bandwidth Test Automation

- **High performance transparent switching solutions designed to automate testing of G.hn Access Wave 2, VDSL2 35b Vectoring & Gfast technologies**
- **Access automated testbed remotely**
- **Select from different modules for switching Twisted Pair or Coax cable Test Beds**
- **Wide Variety of Test Automation Configurations**
 - **Switch in multiple groups of CPE's, DPU's, DSLAM line cards, GNT's, GAMS, etc. to the test environment**
- **Bidirectional**
- **Low Crosstalk**
- **Very Low Insertion Loss**
- **Supports Reverse Power Feeding**
- **Modules plug into multi-slot, rack-mounted chassis**
- **Modular architecture allows for expansion**
- **Can be controlled remotely via Ethernet**
- **Custom cabling available**

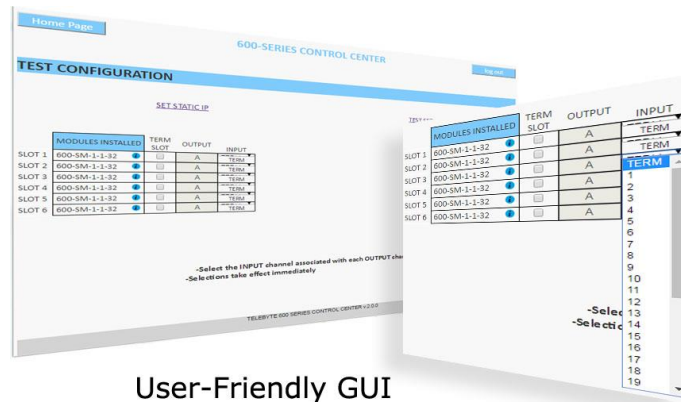


Two Model 600-SM-1-1-32 modules are shown installed in the Model 600-6SL (6-Slot Chassis). Both front (left) and back views are displayed.

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Model 600-6SL (6-Slot Chassis)

- Required for control of 600 Series Switching Matrix modules
- Accepts up to six 600 Series Switching Matrix plug-in modules
- Includes chassis and built-in control module
- Ethernet interface
- Includes 600 Universal GUI Software
- Upgrade firmware in the field



User-Friendly GUI

Ordering Options

Model	Description
600-SM-1-1-32-TP-100	Transparent Switching Matrix Module (1, 1x32) Twisted Pair Cable
600-SM-2-1-16-TP-100	Transparent Switching Matrix Module (2, 1x16) Twisted Pair Cable
600-SM-4-1-8-TP-100	Transparent Switching Matrix Module (4, 1x8) Twisted Pair Cable
600-SM-8-1-4-TP-100	Transparent Switching Matrix Module (8, 1x4) Twisted Pair Cable
600-SM-16-1-2-TP-100	Transparent Switching Matrix Module (16, 1x2) Twisted Pair Cable
600-SM-1-1-16-FCOAX	Transparent Switching Matrix Module (1, 1x16) Coax Cable (F-Type connector)
600-6SL	Chassis accepts six 600 series modules. Required for control of modules.
8xCAT7-32xCAT6-PP	8 Male CAT7 TERA to 32 CAT6 RJ45 Patch panel
600-Custom Cable Set	Custom cabling per customer requirements for CO and/or CPE side of test setup



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Specifications

Product Specifications 600-SM-1-1-32-TP-100 Transparent Switching Matrix Module	
Bidirectional Signal Switching Capability	1 output channel to any one of 32 input signal channels 1 of 32 input signal channels to 1 output channel
Insertion Loss	25 kHz to 30 MHz: 0.36dB (maximum) 30 MHz to 200 MHz: 0.49dB (maximum)
Signal Connectors	<ul style="list-style-type: none"> 8 CAT7 TERA on front (each CAT7 TERA provides connectivity for 4 twisted pairs) 1 CAT6 RJ-45 on back
Noise Floor	Less than -150 dBm/Hz
Impedance	100 ohms
DC Rating	± 60 V between Tip and Ring and 350mA
Relay Cycles of Operation	More than 5,000,000 cycles

Product Specifications 600-SM-2-1-16-TP-100 Transparent Switching Matrix Module	
Bidirectional Signal Switching Capability	2 sets of: 1 output channel to any one of 16 associated input signal channels 2 sets of: Any one of 16 input signal channels to 1 associated output channel
Insertion Loss	25 kHz to 30 MHz: 0.33dB (maximum) 30 MHz to 200 MHz: 0.45dB (maximum)
Signal Connectors	<ul style="list-style-type: none"> 8 CAT7 TERA on front (each CAT7 TERA provides connectivity for 4 twisted pairs) 2 CAT6 RJ-45 on back
Noise Floor	less than -150 dBm/Hz
Impedance	100 ohms
DC Rating	± 60 V between Tip and Ring and 350mA
Relay Cycles of Operation	More than 5,000,000 cycles

Product Specifications 600-SM-4-1-8-TP-100 Transparent Switching Matrix Module	
Bidirectional Signal Switching Capability	4 sets of: 1 output channel to any one of 8 associated input signal channels 4 sets of: Any one of 8 input signal channels to 1 associated output channel
Insertion Loss	25 kHz to 30 MHz: 0.31dB (maximum) 30 MHz to 200 MHz: 0.42dB (maximum)
Signal Connectors	<ul style="list-style-type: none"> 8 CAT7 TERA on front (each CAT7 TERA provides connectivity for 4 twisted pairs) 1 CAT7 TERA
Noise Floor	less than -150 dBm/Hz
Impedance	100 ohms
DC Rating	± 60 V between Tip and Ring and 350mA
Relay Cycles of Operation	More than 5,000,000 cycles



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Specifications continued

Product Specifications 600-SM-8-1-4-TP-100 Transparent Switching Matrix Module	
Bidirectional Signal Switching Capability	8 sets of: 1 output channel to any one of 4 associated input signal channels 8 sets of: Any one of 4 input signal channels to 1 associated output channel
Insertion Loss	25 kHz to 30 MHz: 0.29dB (maximum) 30 MHz to 200 MHz: 0.39dB (maximum)
Signal Connectors	<ul style="list-style-type: none"> • 8 CAT7 TERA on front (each CAT7 TERA provides connectivity for 4 twisted pairs) • 2 CAT7 TERA on back
Noise Floor	less than -150 dBm/Hz
Impedance	100 ohms
DC Rating	± 60 V between Tip and Ring and 350mA
Relay Cycles of Operation	More than 5,000,000 cycles

Product Specifications 600-SM-16-1-2-TP-100 Transparent Switching Matrix Module	
Bidirectional Signal Switching Capability	16 sets of: 1 output channel to any one of 2 associated input signal channels 16 sets of: Any one of 2 input signal channels to 1 associated output channel
Insertion Loss	25 kHz to 30 MHz: 0.25dB (maximum) 30 MHz to 200 MHz: 0.37dB (maximum)
Signal Connectors	<ul style="list-style-type: none"> • 8 CAT7 TERA on front (each CAT7 TERA provides connectivity for 4 twisted pairs) • 4 CAT7 TERA on back
Noise Floor	less than -150 dBm/Hz
Impedance	100 ohms
DC Rating	± 60 V between Tip and Ring and 350mA
Relay Cycles of Operation	More than 5,000,000 cycles

Product Specifications 600-SM-1-1-16-FCOAX Transparent Switching Matrix Module	
Bidirectional Signal Switching Capability	1 output channel to any one of 16 input signal channels 1 of 16 input signal channels to 1 output channel
Insertion Loss	25 kHz to 30 MHz: 0.36dB (maximum) 30 MHz to 200 MHz: 0.49dB (maximum)
Signal Connectors	<ul style="list-style-type: none"> • 16 F-Type Coax connectors on front • 1 F-Type Coax connector on back
Noise Floor	less than -150 dBm/Hz
Impedance	75 ohms
Relay Cycles of Operation	More than 5,000,000 cycles



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Specifications continued

Product Specifications 600-6SL 6-Slot Chassis	
Capacity	Accepts 1-6, 600 Series modules
Dimensions	[4U] 19 in W x 6 in D x 7 in H (482.6 mm W x 152 mm D x 177.8 mm H)
Power Supply Requirements	88 to 264 VAC, 50 or 60 Hz

Specifications are subject to change without notice. Made in USA.



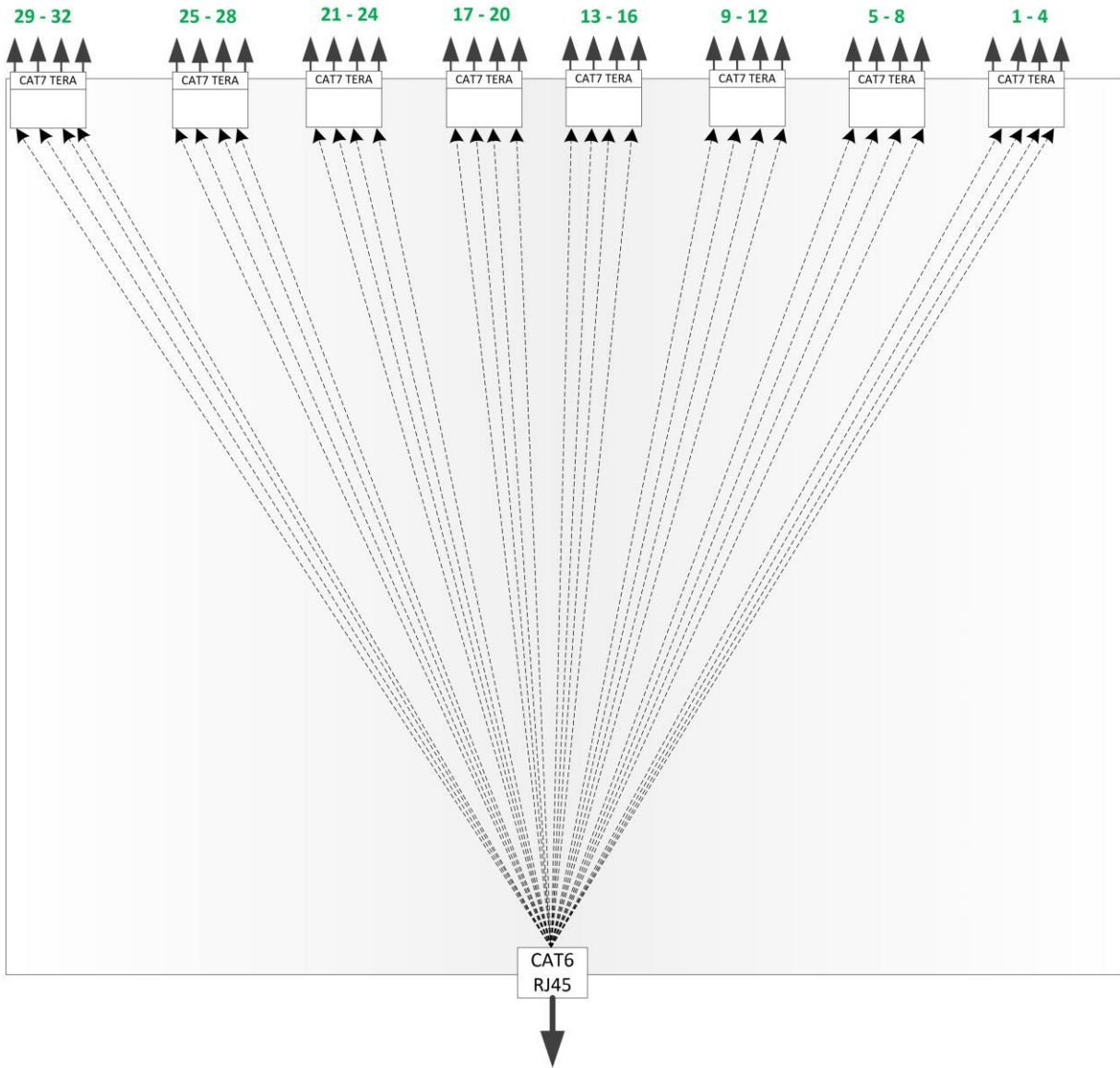
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Diagrams

600-SM-1-1-32-TP-100 (1, 1 x 32)

Input Signal Channels (Front of Unit)



Output Channel (Back of Unit)

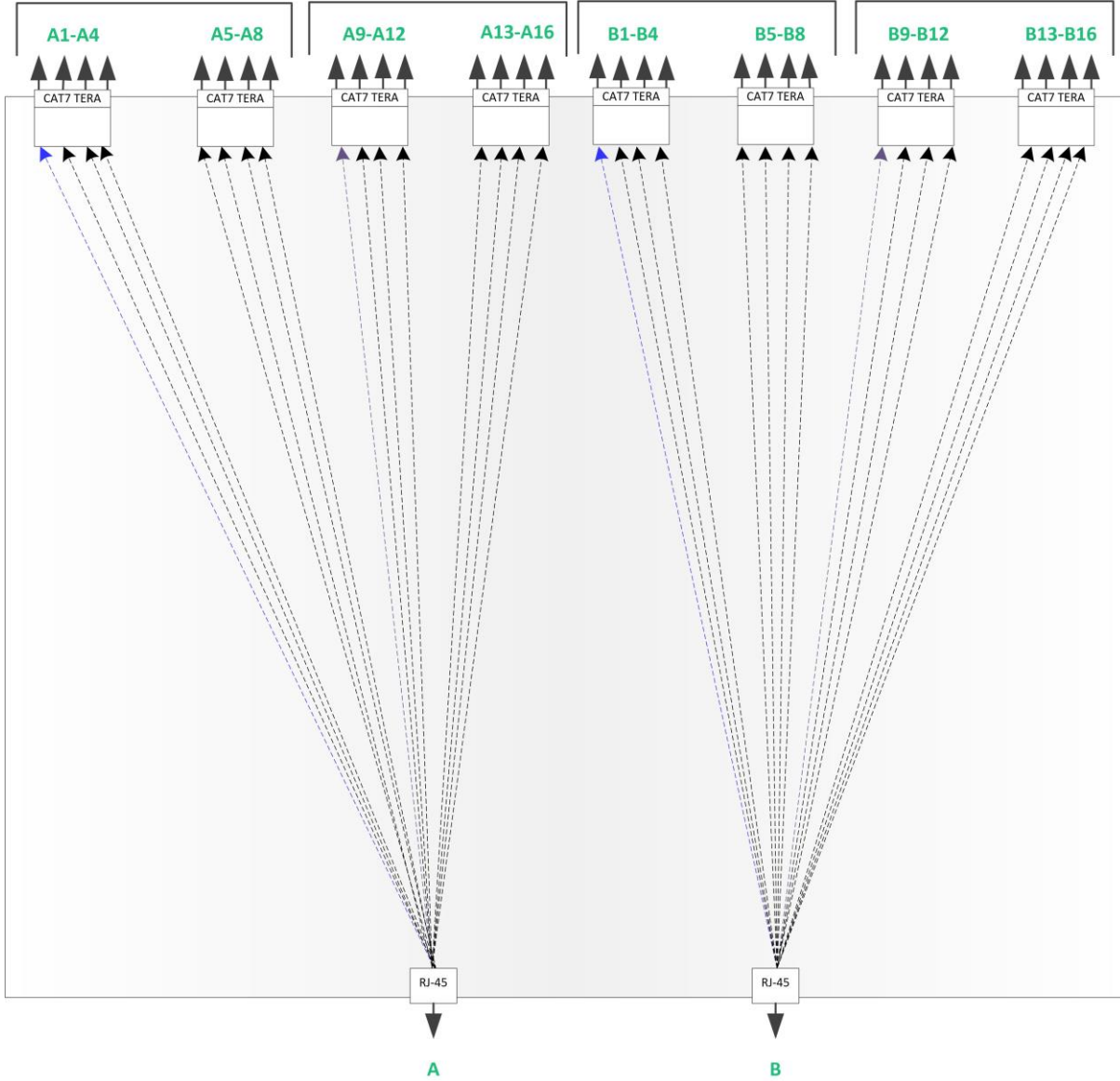


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600-SM-2-1-16-TP-100 (2, 1 x 16)

INPUT SIGNAL (FRONT OF UNIT)



OUTPUT SIGNAL (BACK OF UNIT)

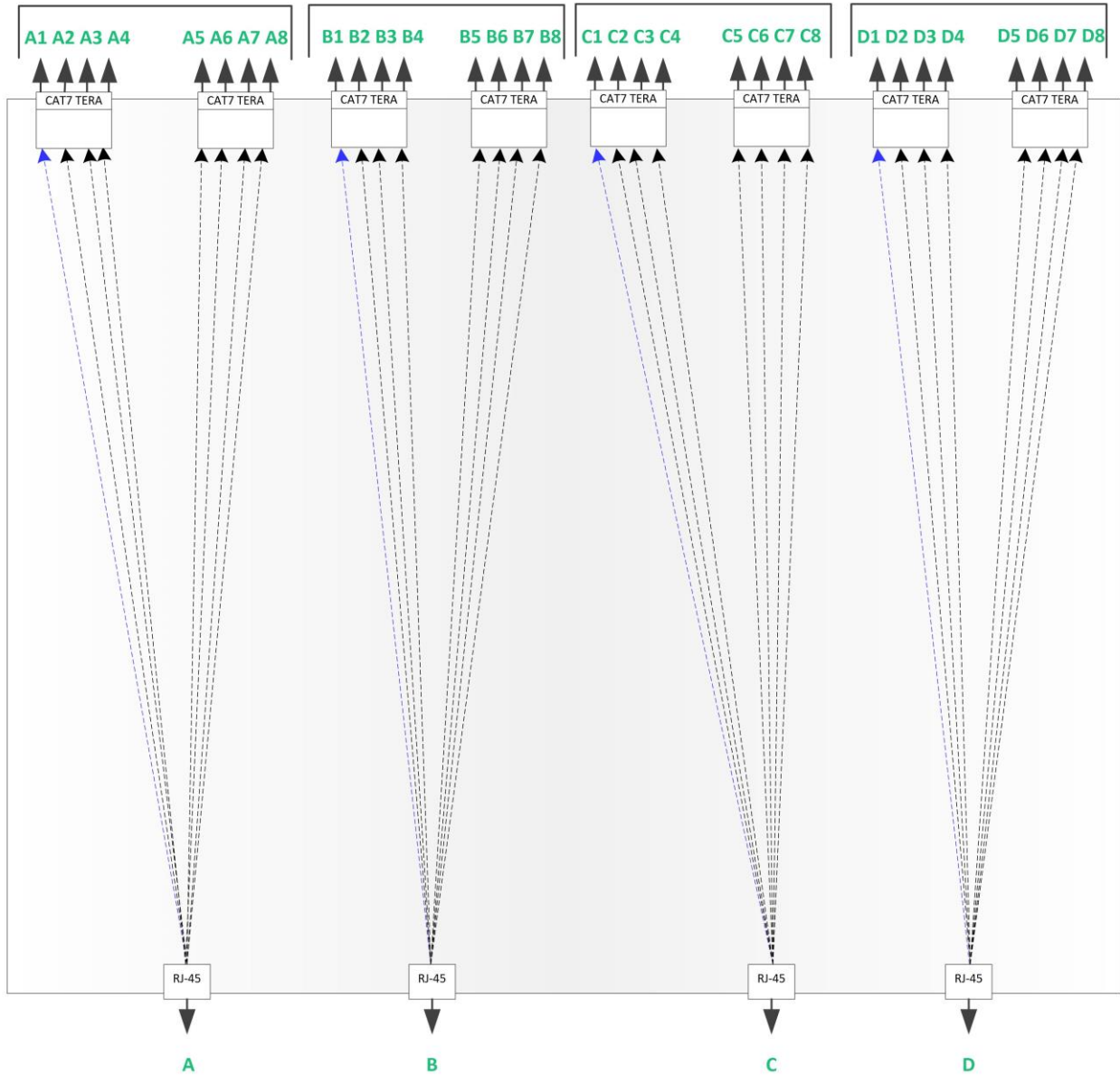


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600-SM-4-1-8-TP-100 (4, 1 x 8)

INPUT SIGNAL (FRONT OF UNIT)



OUTPUT SIGNAL (BACK OF UNIT)

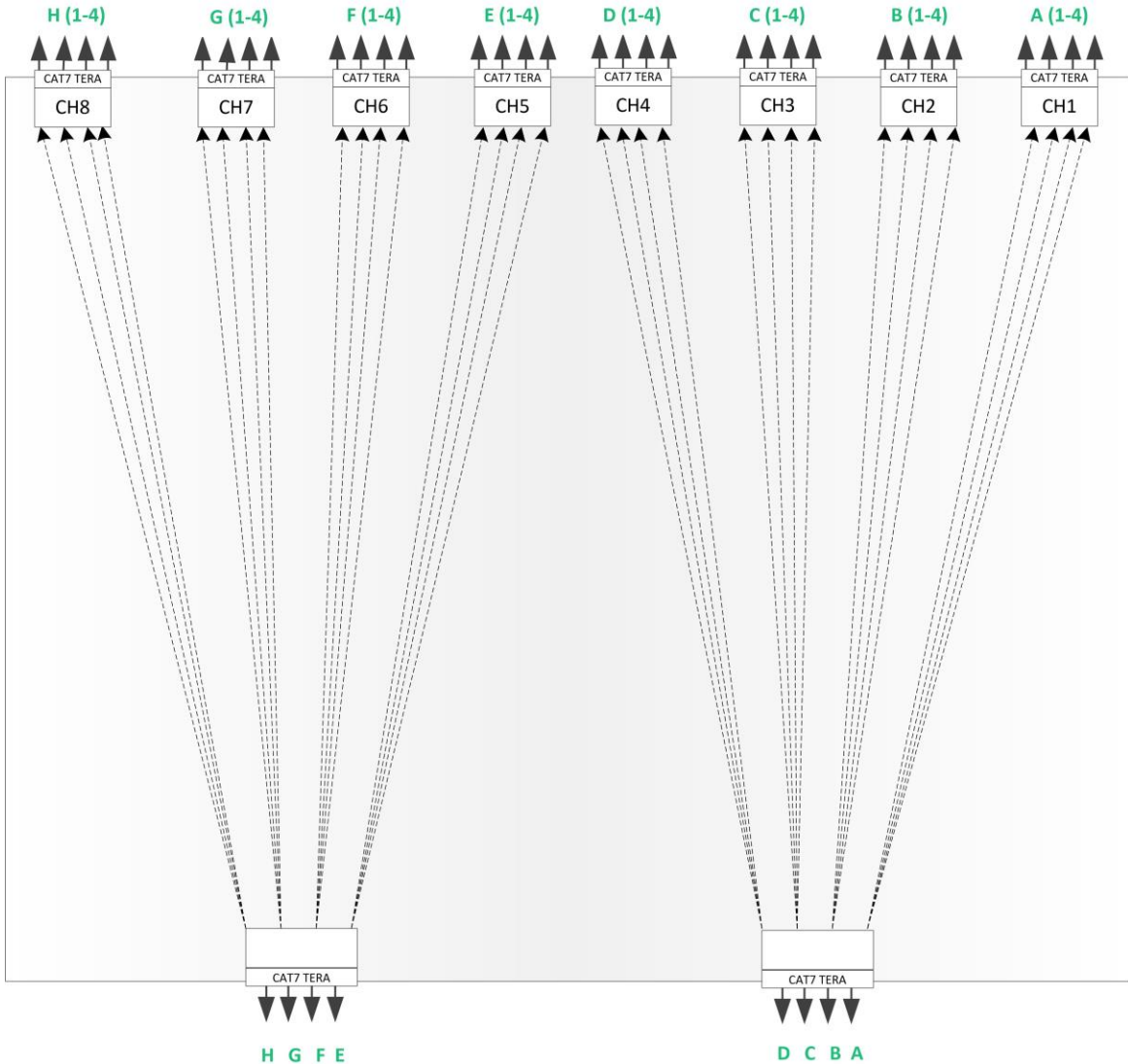


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600-SM-8-1-4-TP-100 (8, 1 x 4)

INPUT SIGNAL (FRONT OF UNIT)

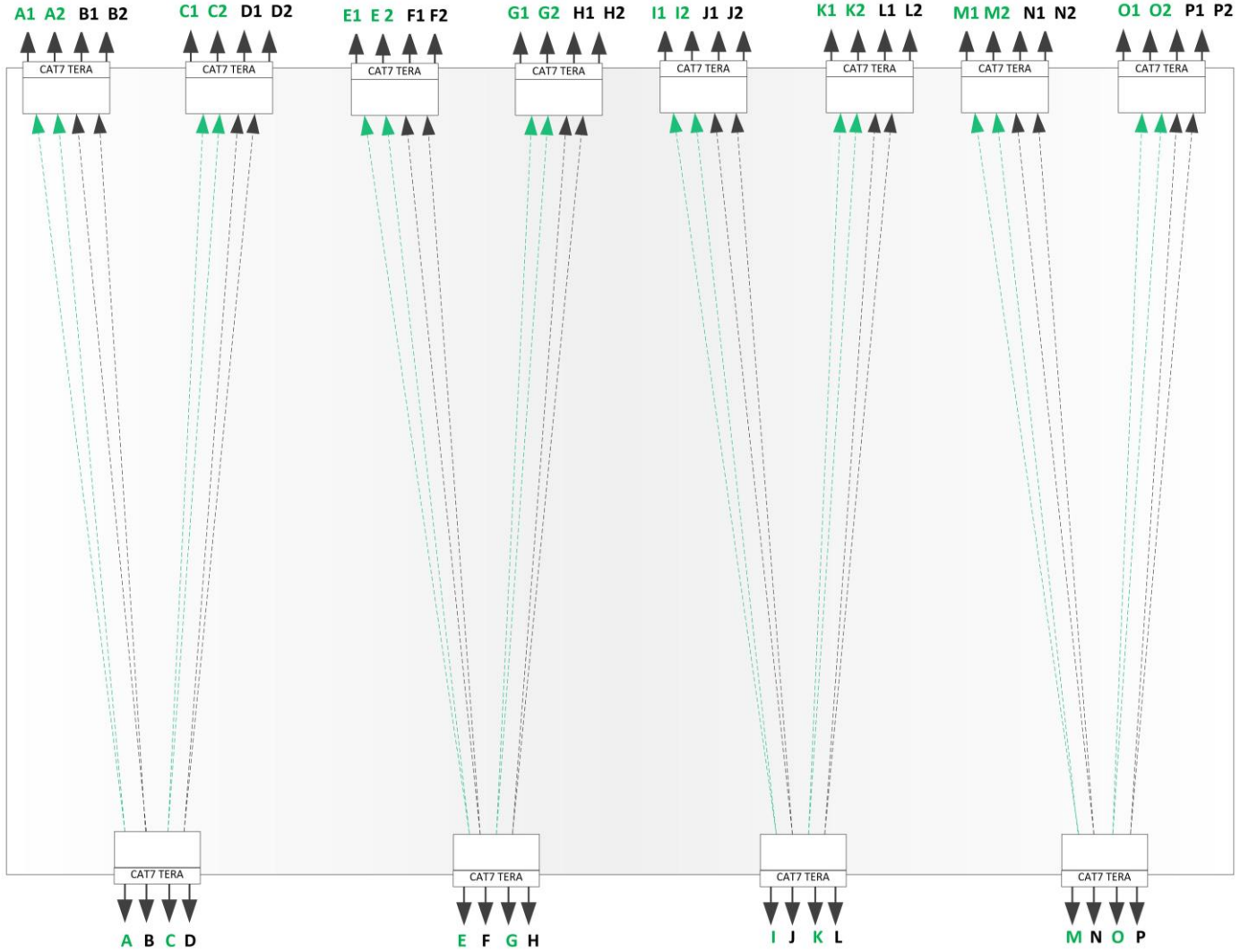


OUTPUT SIGNAL (BACK OF UNIT)

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600-SM-16-1-2-TP-100 (16, 1 x 2)

INPUT SIGNAL (FRONT OF UNIT)



OUTPUT SIGNAL (BACK OF UNIT)

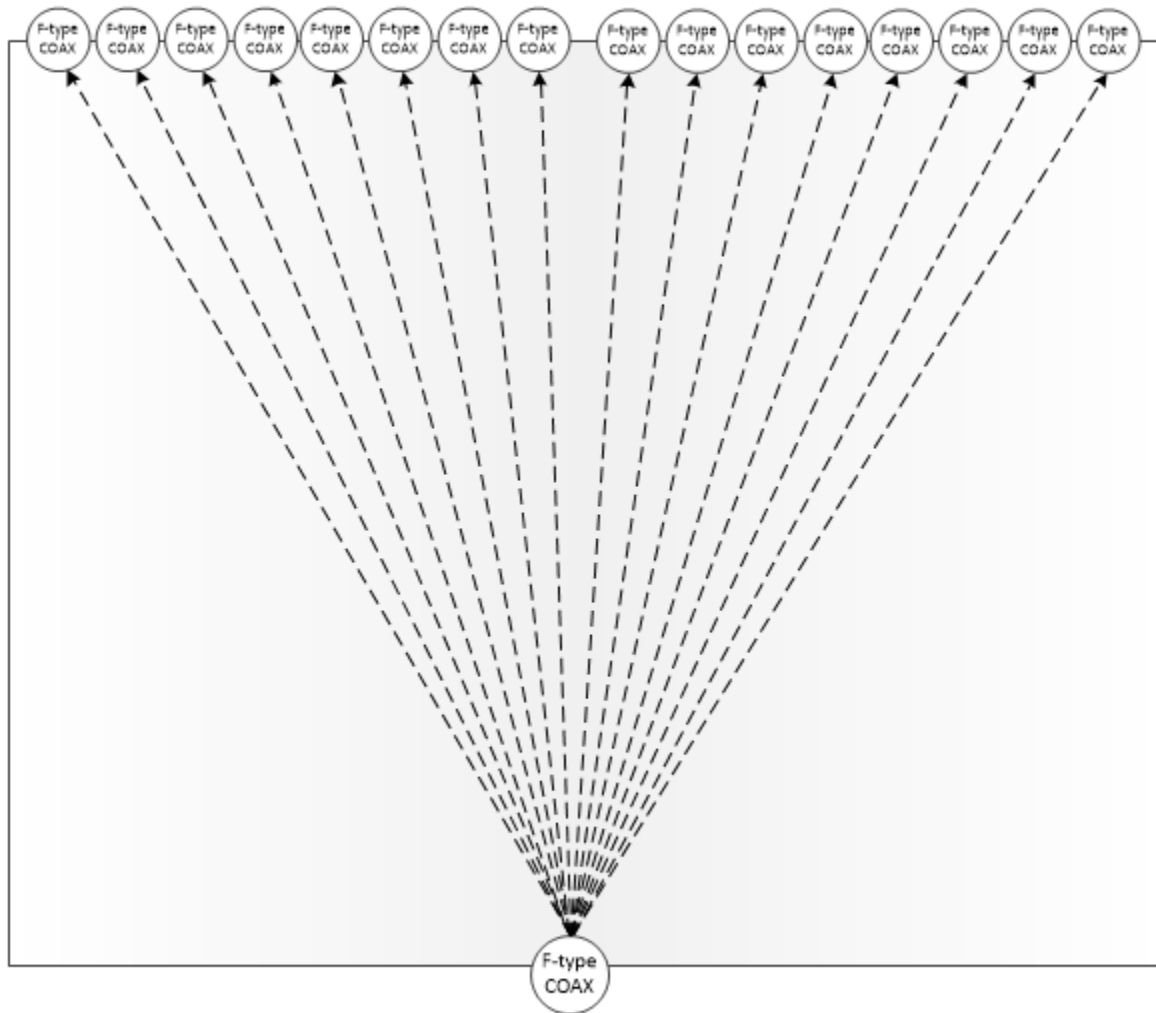


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600-SM-1-1-16-FCOAX

Input Signal Channels (Front of Unit)



Output Channel (Back of Unit)