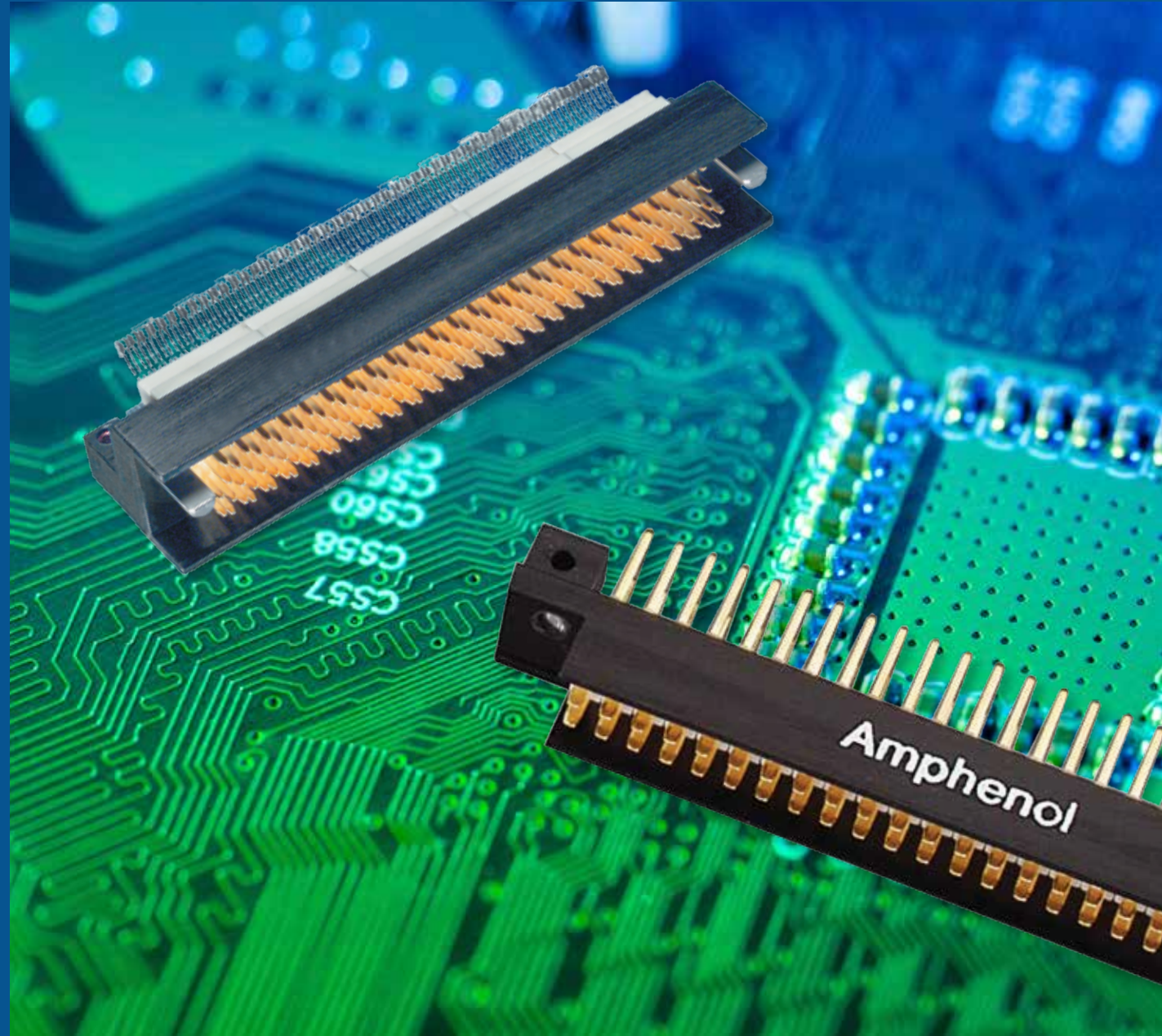


# Amphenol

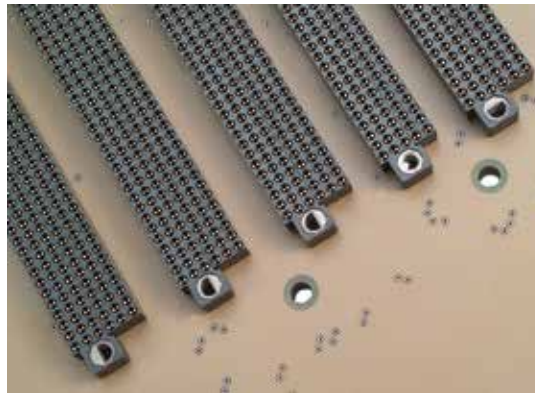
Printed Circuit Board Technology

## NAFI + UHD CONNECTORS STANDARD. RELIABLE. PROVEN.



## Q FEATURES & BENEFITS

- Available in 2 through 4 rows - Offers maximum design flexibility
- Tested and qualified to MIL-C-28859 and MIL-C-28754 - Confirms the product meets specific performance requirements
- Tuning fork and blade contact system - A proven technology for high reliability
- Low insertion force (2.25oz/contact) - For easy mating
- Rugged machined aluminum frames - Ensures excellent performance in harsh environments
- Compliant pin press-fit, through-hole and flex circuit termination styles available - Support a variety of design application requirements



**Tuning Fork and Blade Contact System:**  
 A proven technology for high reliability.



Originally co-developed with the U.S. Navy, the NAFI Connector product line includes multi-row, through-hole solder blade connectors and press fit tuning fork backplane connectors. The highlight of the NAFI backplane technology is its solderless “Dynamic Retention” gas tight, press-fit tuning fork contact design. Rugged, metal header bodies are machined and finished with chromate. Available in two, three, or four rows of contacts, NAFI Connectors offer a high degree of design flexibility in order to meet specific density and layout requirements.

Connector patterns containing multiple rows of contacts are easily produced and can include standard NAFI-style features such as guide pins and D-shaped polarizing keys. The mating backplane connectors feature solderless press-fit tuning fork contacts arranged on a 0.100” x 0.100” grid.





# NAFI TECHNICAL REFERENCES



## OPERATING CHARACTERISTICS

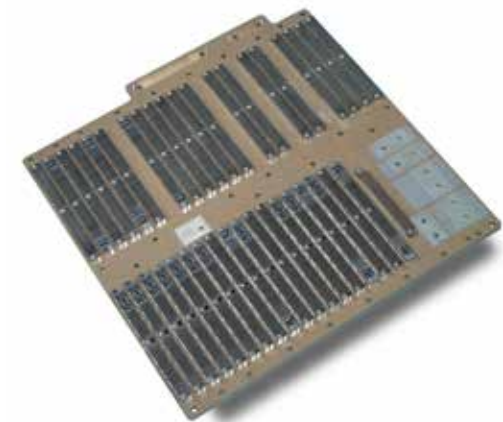
Temperature Range	-65°C to +125°C
Current Rating (individual contact)	3 Amps DC at 25°C
Current Rating (multiple contacts)	1 Amp DC at °C
Dielectric Withstanding Voltage (DWV)	600 V (RMS) at 60 Hz
Insulation Resistance (min.)	10,000 MΩ
Contact Resistance (max.)	30 MΩ
Contact-to-Backplane Retention Force (min.)	3.0 lbs.
Contact Life (durability)	500 cycles
Contact Engagement Force	2.25 oz max. average
Contact Normal Force	1.0 N (3.53 oz-f) average
Contact Wipe Length (min.)	0.053 in.

## MATERIALS & FINISHES

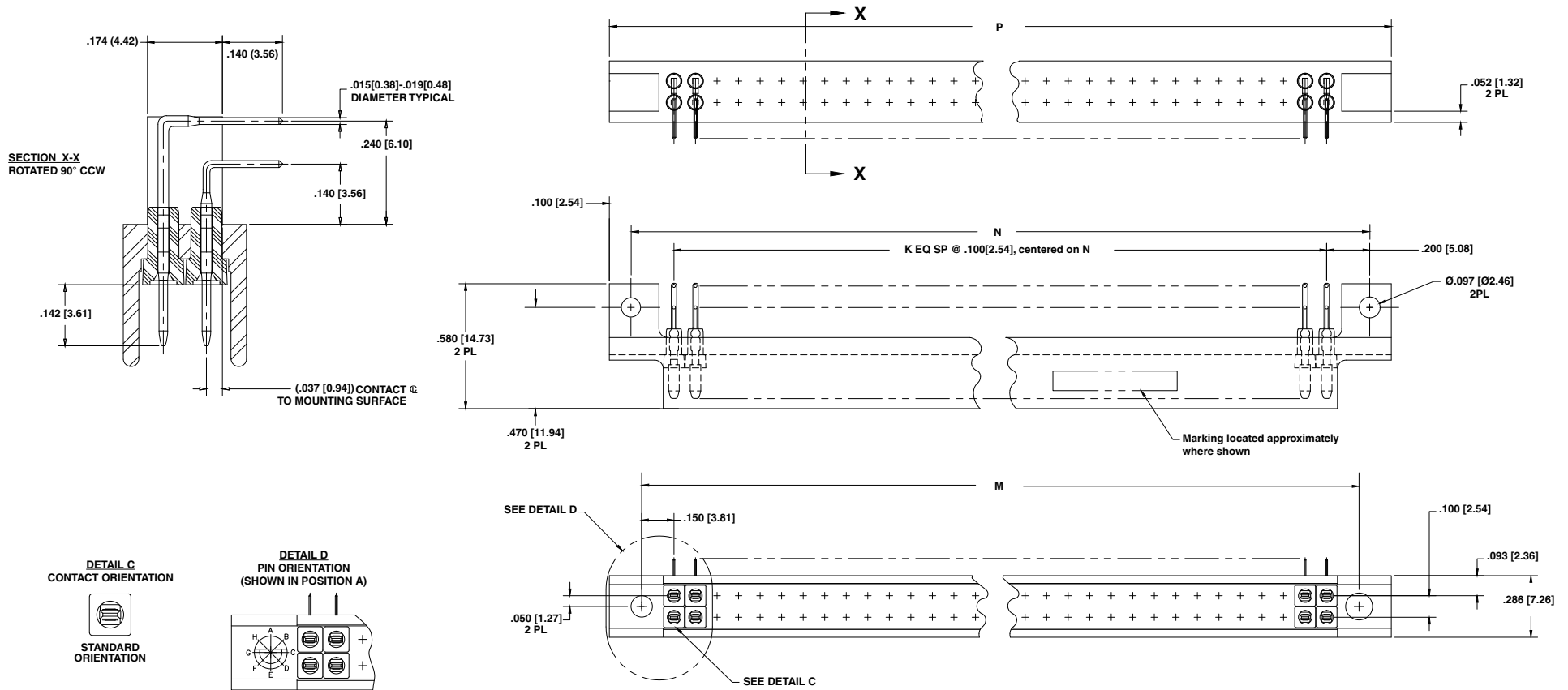
Frame Material	Aluminum Alloy
Frame Finish	Gold Chromate per MIL-C-5541
Module Contact Material	Brass
Module Contact Tails	Pre-tinned using Sn63 (from end of contact to mounting surface min.)
Module Contact Finish	50μ" min. Gold over 10μ" min. Nickel
Backplane Contact Material	Beryllium Copper
Backplane Contact Finish	50μ" min. Gold over 10μ" min. Nickel
Module Insulator	High-temperature Nylon 6-6
Backplane Insulator	Polyester, 30% glass-filled (UL 94V-0)
Module Marking	Includes Amphenol part number, logo and date code
Polarizing Keys and Bushings	Stainless Steel, Passivated

## ENVIRONMENTAL CHARACTERISTICS

Salt Spray (corrosion)	MIL-STD-1344	Method 1001, Test Condition B
Thermal Shock	MIL-STD-1344	Method 1003, -55°C to +125°C
Humidity	MIL-STD-810	Method 507, Procedure 1
Physical Shock	MIL-STD-202	Method 213
Vibration (random)	MIL-STD-1344	Method 2005, 10-2000 Hz, 15g Peak



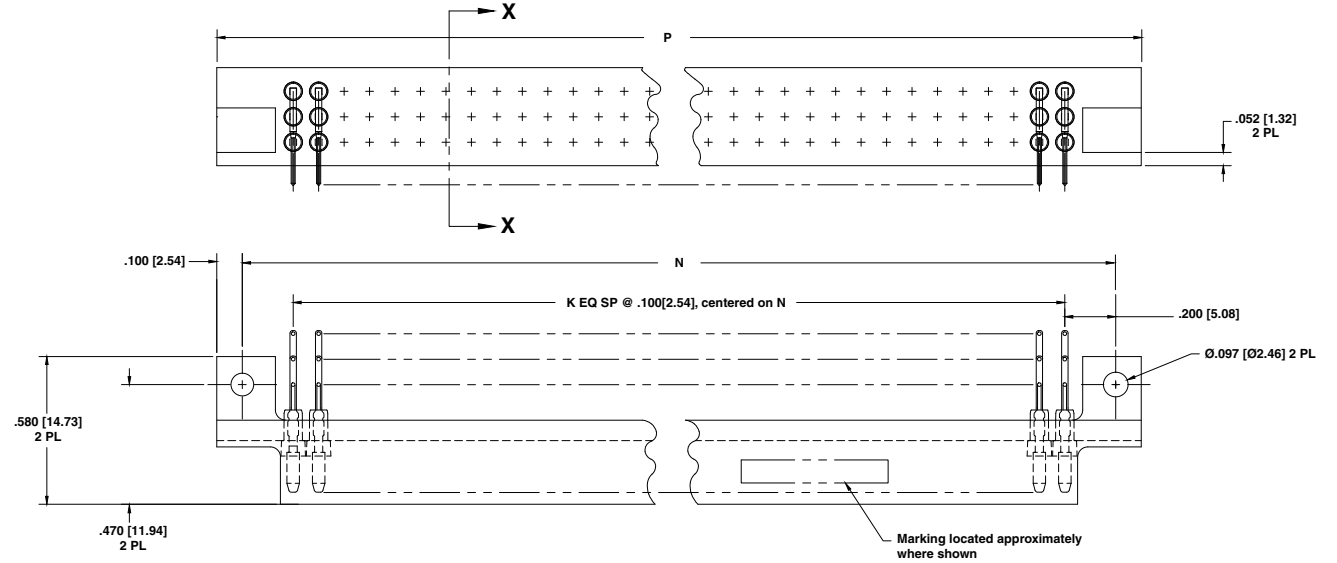
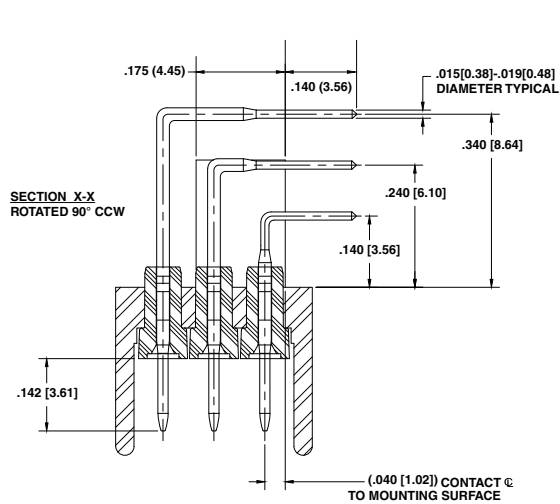
# NAFI TWO ROW



Daughtercard Connector	No. Contacts	Mating Backplane Connector Kit	K	M	N	P
M1001-12927	60	552-2583-000	29	2.930	2.940	2.960
M1001-12928	80	552-2584-000	39	3.930	3.940	3.960
M1001-12929	100	552-2585-000	49	4.930	4.940	4.960
M1001-12930	120	552-2586-000	59	5.930	5.940	5.960



# NAFI THREE ROW

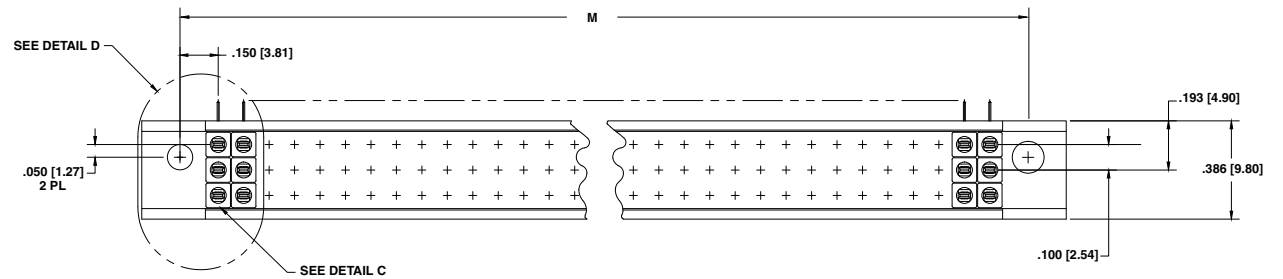
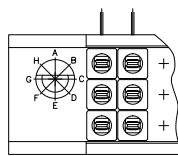


DETAIL C  
CONTACT ORIENTATION



STANDARD  
ORIENTATION

DETAIL D  
PIN ORIENTATION  
(SHOWN IN POSITION A)

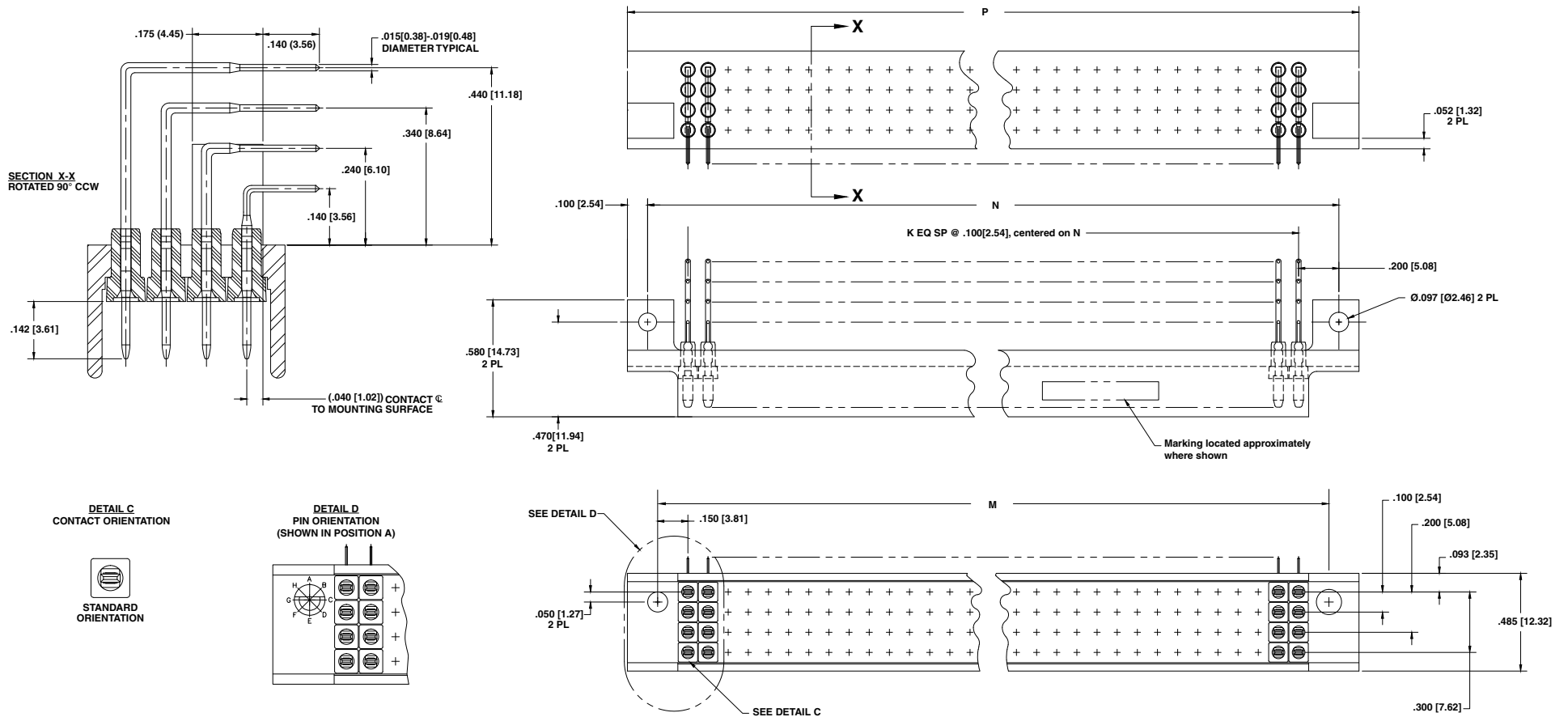


Daughtercard Connector	No. Contacts	Mating Backplane Connector Kit	K	M	N	P
M1001-12931	66	552-2587-000	21	2.130	2.140	2.160
M1001-12932	99	552-2588-000	32	3.230	3.240	3.260
M1001-12933	120	552-2589-000	39	3.930	3.940	3.960
M1001-12934	150	552-2590-000	49	4.930	4.940	4.960

\*All dimensions for reference only



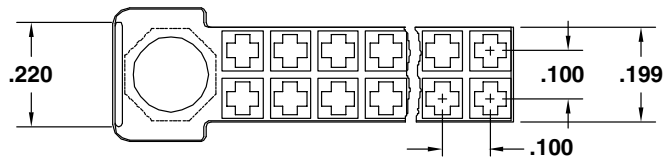
# NAFI FOUR ROW



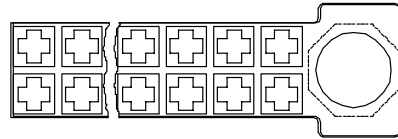
Daughtercard Connector	No. Contacts	Mating Backplane Connector Kit	K	M	N	P
M1001-12935	100	552-2591-000	24	2.430	2.440	2.460
M1001-12936	140	552-2592-000	34	3.430	3.440	3.460
M1001-12937	180	552-2593-000	44	4.430	4.440	4.460
M1001-12938	200	552-2594-000	49	4.930	4.940	4.960



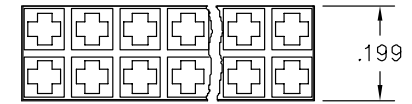
# NAFI BACKPLANE CONNECTOR KITS



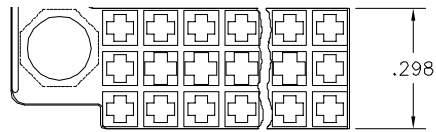
**2 ROW LEFT NAFI VERSION  
(BOTTOM VIEW)**



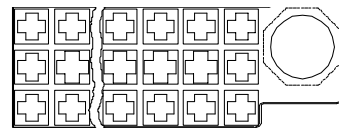
**2 ROW RIGHT NAFI VERSION  
(BOTTOM VIEW)**



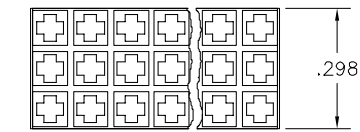
**2 ROW W/O NAFI VERSION  
(BOTTOM VIEW)**



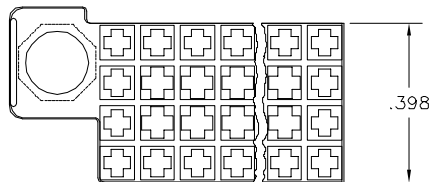
**3 ROW LEFT VERSION  
(BOTTOM VIEW)**



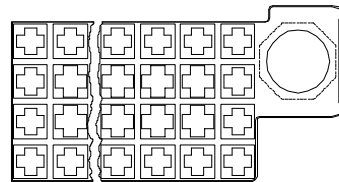
**3 ROW RIGHT VERSION  
(BOTTOM VIEW)**



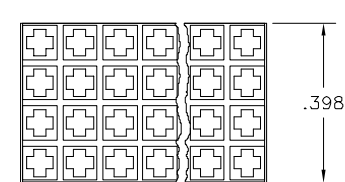
**3 ROW W/O NAFI VERSION  
(BOTTOM VIEW)**



**4 ROW LEFT VERSION  
(BOTTOM VIEW)**



**4 ROW RIGHT VERSION  
(BOTTOM VIEW)**



**4 ROW W/O NAFI VERSION  
(BOTTOM VIEW)**

2 ROW INSULATOR			3 ROW INSULATOR			4 ROW INSULATOR		
Backplane Connector Kit	No. of Contacts	Mating Daughtercard Connector	Backplane Connector Kit	No. of Contacts	Mating Daughtercard Connector	Backplane Connector Kit	No. of Contacts	Mating Daughtercard Connector
552-2583-000	60	M1001-12927	552-2587-000	66	M1001-12931	552-2591-000	100	M1001-12935
552-2584-000	80	M1001-12928	552-2588-000	99	M1001-12932	552-2592-000	140	M1001-12936
552-2585-000	100	M1001-12929	552-2589-000	120	M1001-12933	552-2593-000	180	M1001-12937
552-2586-000	120	M1001-12930	552-2590-000	150	M1001-12934	552-2594-000	200	M1001-12938



# Amphenol

Printed Circuit Board Technology

**Amphenol Printed Circuit Board Technology**

**Phone: (603) 324-4500**

**[www.amphenol-apcibt.com](http://www.amphenol-apcibt.com)**



**New Hampshire Assembly:  
18 Celina Ave, Exit 8  
Nashua, NH**



**Panels, Materials, Front End:  
91 Northeastern Blvd, Exit 4  
Nashua, NH**



**Mexico Assembly & Connectors:  
Optimize Plant 3 & 6  
Nogales, Mexico**