Ulti-Mate Connectors

Ulti-Mate Nano PCB

Right Angle Dual SMT Plastic Shell (Style 28) Connectors

Winchester Interconnect Micro offers Nano PCB Right Angle Dual Row Plated Thru Hole Plastic Shell (Style 8) Connectors, engineered for compact, high-performance interconnect applications. These connectors feature a durable plastic shell with flat tail termination and .025 x .040 (Style 28) spacing for stable PCB mounting. Operating within a temperature range of −55°C to 125°C—with high-temperature versions up to 200°C (add HT)—they are available in 9 to 65 contact configurations. As a QPL-qualified supplier for MIL-DTL-32139 products, Winchester ensures reliability and precision in every connection.

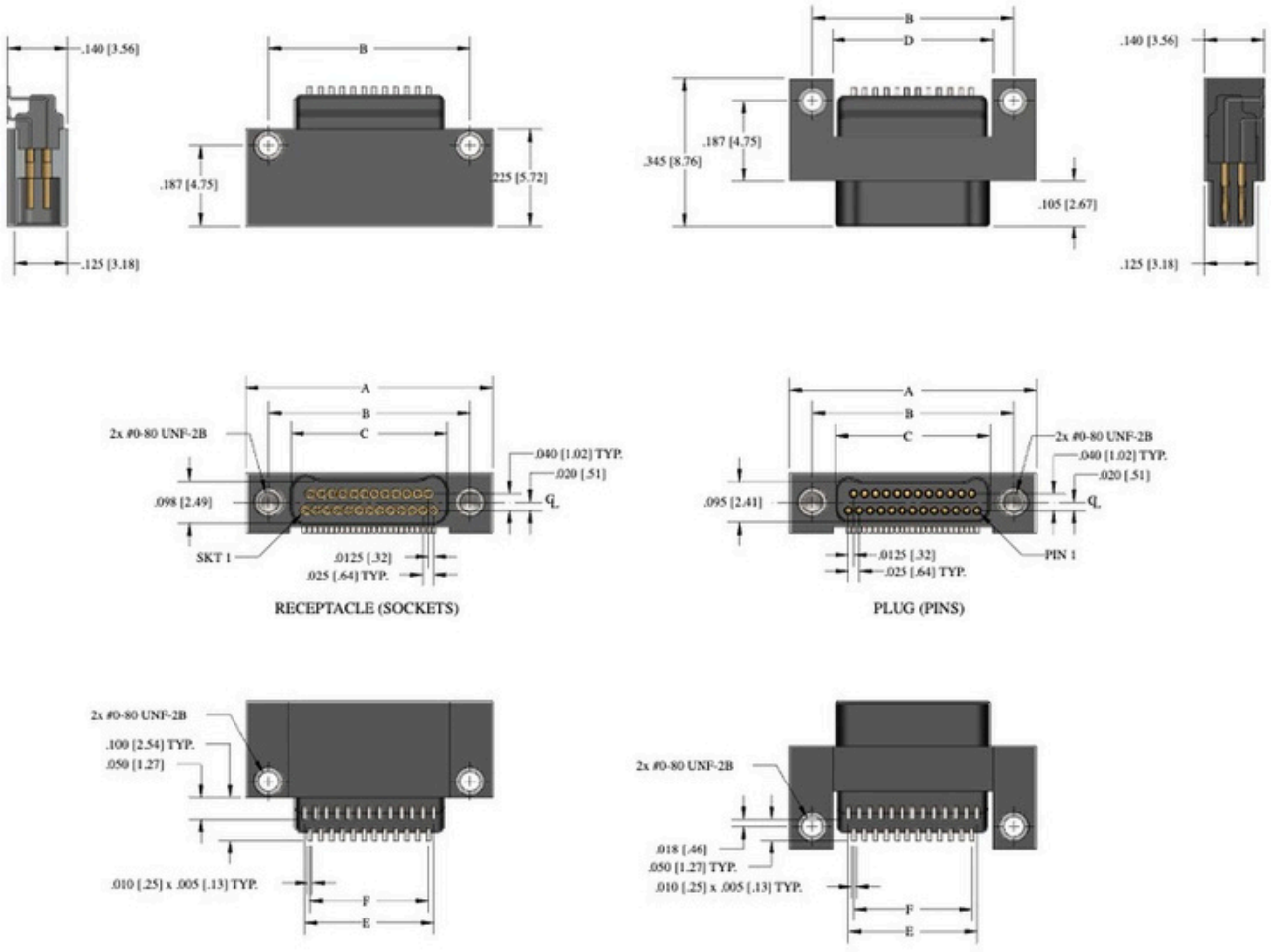


KEY FEATURES & BENEFITS

- Durable Plastic Shell – Provides lightweight protection and insulation for compact designs.
- Right-Angle Plated Thru Hole Design – Enables secure, low-profile PCB integration.
- Wide Temperature Range – Operates from −55°C to 125°C, with optional high-temp versions up to 200°C.
- High-Performance Contacts – Signal pin and socket contacts made from C17410 Beryllium Copper for superior conductivity.
- Gold-Plated Finish – Gold plating per ASTM B488 ensures corrosion resistance and stable signal transmission.
- Versatile PC Tail Options – PC tails in C17410 Beryllium Copper with 60/40 Tin/Lead or Gold plating options.
- Multiple Contact Counts – Available with 9 to 65 contacts to support diverse application requirements.

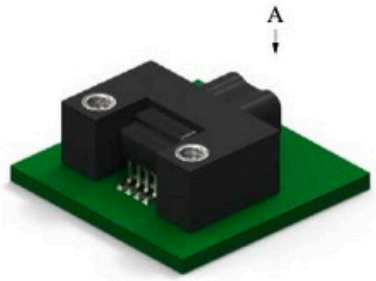
Nano PCB Right Angle Dual SMT Plastic Shell (Style 28) Connectors

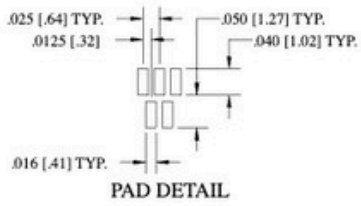
DIMENSIONAL



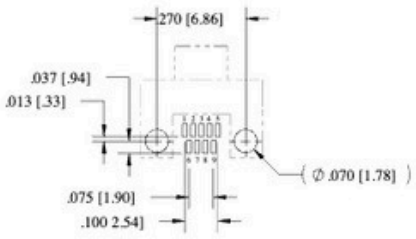
Size	A	B	C		D
			Receptacle	Plug	
9	.375 [9.52]	.270 [6.86]	.160 [4.06]	.163 [4.14]	.175 [4.44]
15	.450 [11.43]	.345 [8.76]	.235 [5.97]	.238 [6.04]	.250 [6.35]
21	.525 [13.33]	.420 [10.67]	.310 [7.87]	.313 [7.95]	.325 [8.25]
25	.575 [14.60]	.470 [11.94]	.360 [9.14]	.363 [9.22]	.375 [9.52]
31	.650 [16.51]	.545 [13.84]	.435 [11.05]	.438 [11.12]	.450 [11.43]
37	.725 [18.41]	.620 [15.75]	.510 [12.95]	.513 [13.03]	.525 [13.33]
51	.900 [22.86]	.795 [20.19]	.685 [17.40]	.688 [17.47]	.700 [17.78]
65	1.075 [27.30]	.970 [24.64]	.860 [21.84]	.863 [21.92]	.875 [22.22]

PCB – MALE

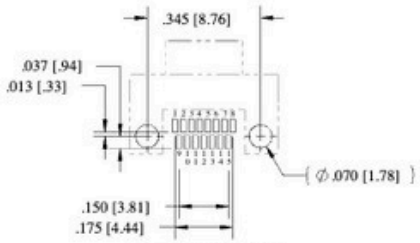




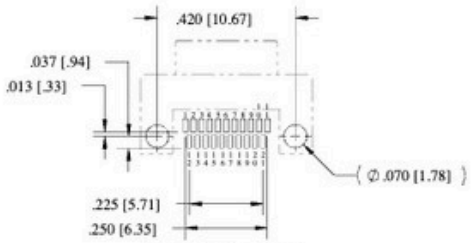
PAD DETAIL



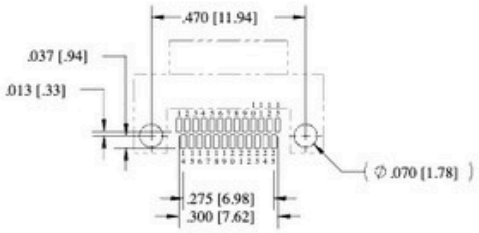
SIZE 9 - VIEW A



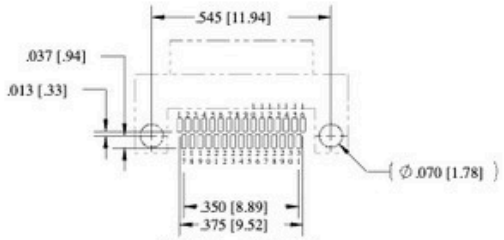
SIZE 15 - VIEW A



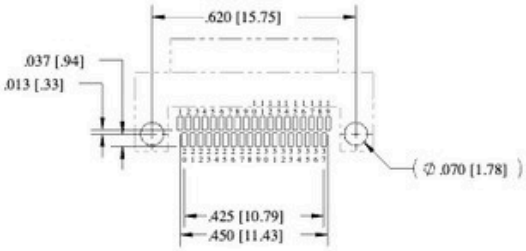
SIZE 21 - VIEW A



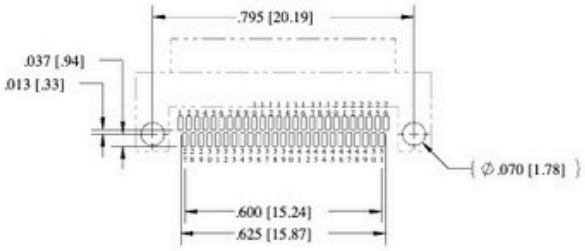
SIZE 25 - VIEW A



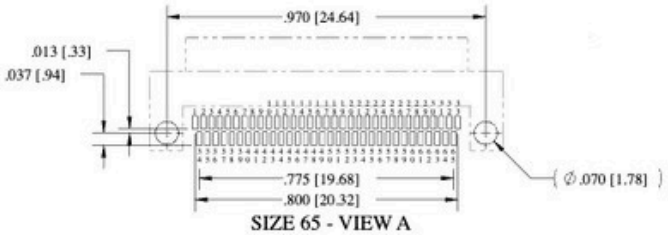
SIZE 31 - VIEW A



SIZE 37 - VIEW A



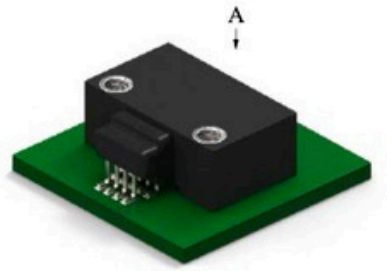
SIZE 51 - VIEW A

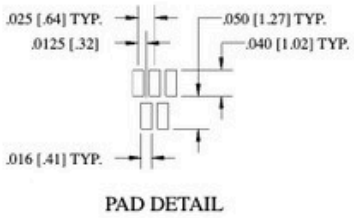


SIZE 65 - VIEW A

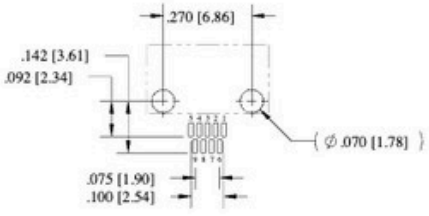
Winchester Interconnect.

PCB – FEMALE

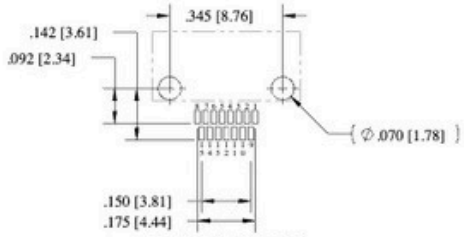




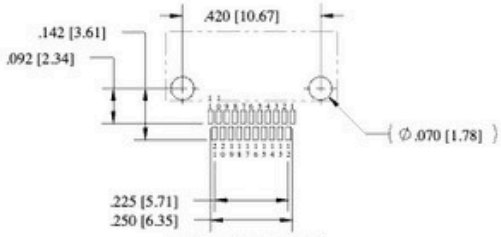
PAD DETAIL



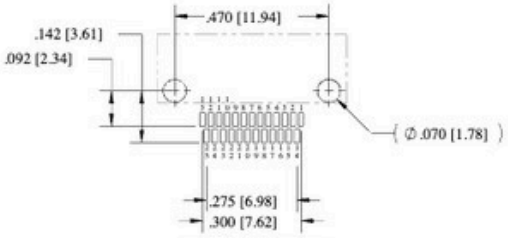
SIZE 9 - VIEW A



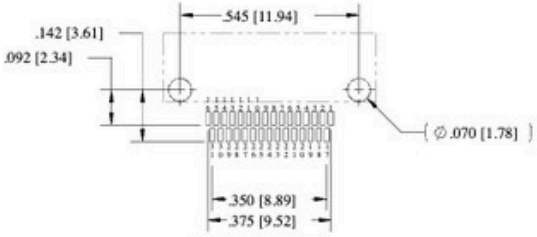
SIZE 15 - VIEW A



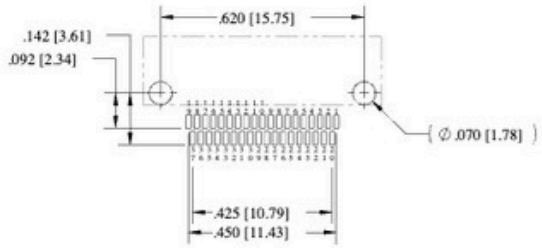
SIZE 21 - VIEW A



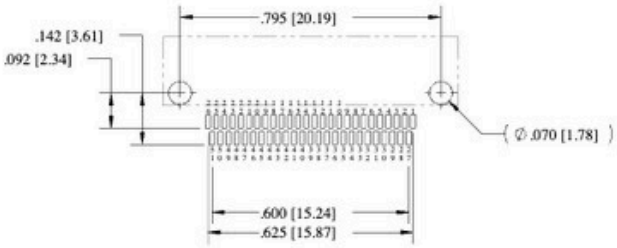
SIZE 25 - VIEW A



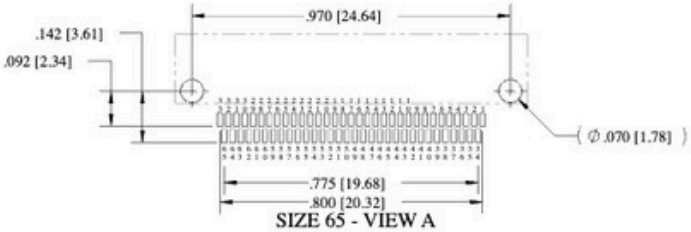
SIZE 31 - VIEW A



SIZE 37 - VIEW A



SIZE 51 - VIEW A



SIZE 65 - VIEW A

Winchester Interconnect

PERFORMANCE

Electrical Properties	
Contact Resistance	33 milliohm max contact only and 87 milliohms max with 6" wire @ 1A
Current Rating	1A max.
Dielectric WithStanding Voltage	250 VAC at sea level, 100 VAC at 70,000 feet. 1mA leakage current max.
Insulation Resistance	100 VDC and 5000 Megohms min.

Mechanical	
Engaging Force	5 oz max.
Separation Force	.4 oz min.
Mating/Unmating Force	7 oz x # of contacts max.
Vibration	EIA-364-28 Condition IV, 1 microsecond max discontinuity
Shock	EIA-364-27 Condition G, 1 microsecond max discontinuity
Durability	EIA-364-09, 200 matings, passes Mating Force, CR, Eng and Sep Forces

MATERIALS

Materials and Finishes	
Signal Pin Contacts	C17410 Beryllium Copper per ASTM B768
Signal Socket Contacts	C17410 Beryllium Copper per ASTM B768
Contact Plating	Gold Plating per ASTM B488
PC Tails	C17410 Beryllium Copper per ASTM B768
PC Tail Plating	60/40 Tin/Lead plating per SAE-AMS-P-81728, or Gold plating per ASTM B488
Shell	6061-T6 Aluminum per SAE-AMS-QQ-A200/8 or 300 Series Stainless Steel per ASTM A582
Shell Plating	Electroless Nickel per SAE-AMS2404, or Cadmium per SAE-AMS-QQ-P-416 or Black Anodize per MIL-A-8625 or Passivated per AMS2700
Insulator Material	LCP(Liquid Crystal Polymer) GLCP-30F or PPS per MIL-M-24519 GST-40F
Hardware	300 Series Stainless Steel per ASTM A 582/A582 or ASTM A 581/A581M, Passivated per SAE AMS-2700

Nano PCB Right Angle Dual SMT Plastic Shell (Style 28) Connectors

HOW TO ORDER

Nano Circuit Series Engineering Number Definitions

CN M 6 L 25 - 2 P 07 1 - 0.140 - S01 - HT - 1 SPL

Nano Circuit Series

Shell Material
M = Metal Shell
P = Plastic Shell

Termination Style
4 = Flex Circuit
6 = Vertical PC tails
8 = Right Angle PC Tails
26 = Vertical SMT
28 = Right Angle SMT
36 = Low Profile Vertical SMT (Male Only)
38 = Extended Profile RA SMT (Female Only)

Insulator Material
L = LCP

Size (No. of Contacts)
09, 15, 21, 25, 31, 37, 51, 65, & 69

Insulator Type
1 = Single Row (Up to size 51)
2 = Dual Row

Contact Type
P = Pin, Integral Flat Tail
S = Socket, Integral Flat Tail

Mating Hardware
0 = No Hardware
01 = Phillips Head Jackscrews
02 = Hex Head Jackscrews
03 = Thumb Jackscrew
05 = Slotted Head Jackscrews
06 = Floating Phillips Head Jackscrews (Female Only)
07 = Threaded Hole
08 = Floating (Retractable) Hex Head Jackscrews (Female Only)
09 = Floating (Retractable) Slotted Head Jackscrews (Female Only)

Lead Plating
1 = Tin/Lead (minimum 3% Lead) plated (Not RoHS Compliant) (Not Available with high temp (HT) connectors)
2 = Gold Plated (RoHS Compliant)

Board Thickness (Style 4 Only)
Blank = .010
Other Panel Thicknesses 0.030 & 0.054
(Consult Factory for Additional Thicknesses)

Lead Length (Style 6 and 8 Only)
Blank = 0.109
Other Lengths = 0.140 & 0.172
(Consult Factory for Additional Lengths)

Shell Plating or Material (Omit for plastic shell or cadmium plating)
Blank = Cadmium
S01 = Electroless Nickel
S02 = Chem Film
S03 = Black Anodized
S04 = Gold
S05 = Titanium
S06 = Olive-Drab Cadmium
S07 = Black Nickel
S08 = Nickel-PTFE
S09 = Stainless Steel, Passivated
S10 = Zinc Nickel

Temperature Rating (Omit for standard Temp, 125°C)
Blank = 125°C
HT = 200°C
LO = 4 Kelvin

PCB Mounting Options (Style 8, 28, & 38 Only)
Blank = Threaded Mounting Holes
1 = Alignment Posts with Threaded Mounting Holes
2 = Clearance Mounting Holes
3 = Alignment Posts with Clearance Mounting Holes
4 = Solder Posts (Style 6, 8, 26, 28, 36, & 38)

Special designator - SPL is to be added to the end of the part number if the connector cannot be fully defined by the rest of the engineering number

Winchester Interconnect