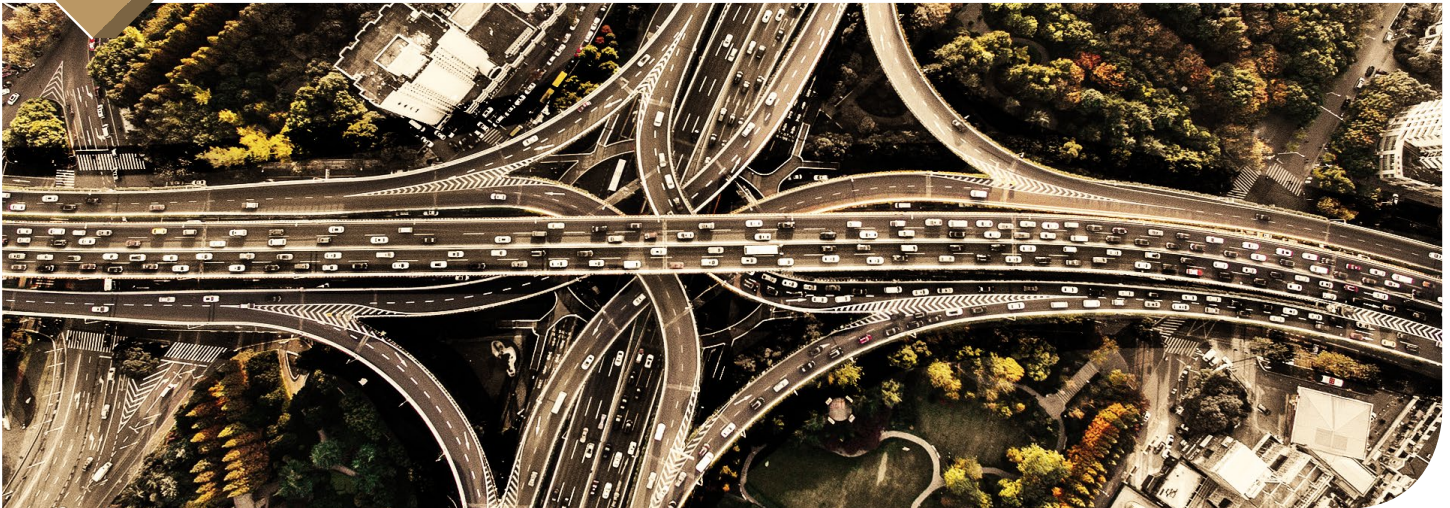




CONNECTOR ORIENTATION



Outside The Mainstream On Purpose

The orientation of category 6A MD-series patch panel cable termination connectors may look non-mainstream but there were specific design reasons.

One of the major problems in high-frequency transmission over twisted-pair lines is so-called alien cross-talk (AXT), a noise created in copper cable pairs or connector's circuitry by all combined external electromagnetic (EM) noise sources (in contrast to internal crosstalk (XT) such as NEXT/ACRF that is interference between elements within the same connector). In common network environments in the absence of high-power external EM sources, the overwhelming portion of AXT noise is generated by other connectors in the vicinity.

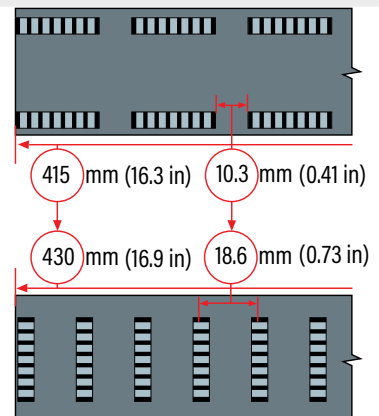
Controlling AXT is especially critical for normal functioning of applications using all four pairs in duplex mode for transmission simultaneously (e.g., 10GBASE-T and other "multi-gigabit" techniques) when inter-pair XT can be effectively cancelled by receivers since they "know" what their "native" transceivers send down the line, while AXT is unpredictable since it's coming from "unknown" ("alien") sources. In unscreened connecting hardware the only way to reduce AXT is spatial separation of connectors. The larger the gap between any two connectors, the better the AXT.

The Cat 6A MD-series panel belongs to the unscreened family of products and requires more separation to comply with Cat 6A transmission specifications. To ensure better AXT the panel base was extended from 415 mm to 430 mm and connectors were turned 90° to increase the space between connectors. The design change allowed for an additional 8-mm (0.33-in) spatial difference compared with the conventional MD-Series panels, thus reducing AXT.

Contact our Technical Support today for any additional questions:

techsupport@signamax.com or 1.800.446.2377

MD-Series panel
with standard base &
traditional horizontal
connector layout



Cat 6A MD-Series
panel with extended
base & improved
connector layout