

| PROJECT INFORMATION | | |
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| JOB NAME | | TYPE |
| ORDERING CODE | | |

IGOR-TECH

PoE Reference Sheet

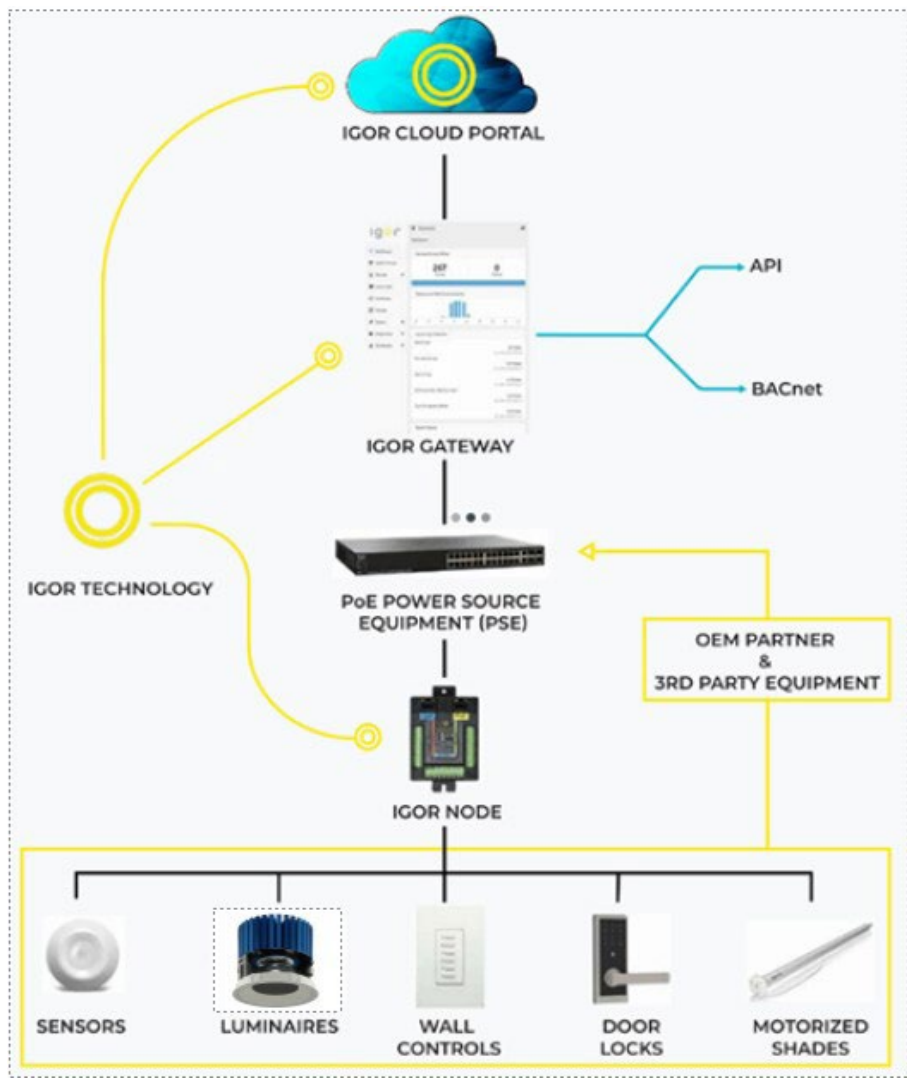


The PoE components written here are for reference for Alphabet products only and all third party components shall be provided by the customer through the OEM website. For more information, please visit www.igor-tech.com.

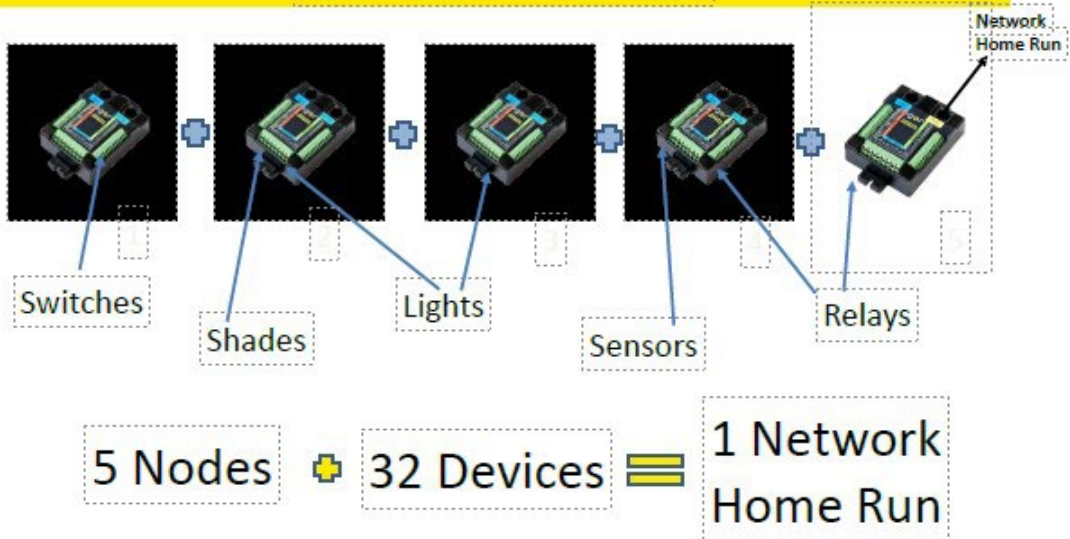
| SERIES | IGR | Igor-tech |
|---|------------------|--|
| CONTROL NODE | NP50-60-W-N-N | 48V PoE remote network node, standard Cat-5/RJ45 connection, dim-to-dark; 1 channel with a combined 8-53W, 12-48Vdc output. |
| | ND50-60-W-N-N | 48V PoE remote device node, standard Cat-5/RJ45 connection, dim-to-dark; 1 channel with a combined 8-53W, 12-48Vdc output. |
| | NP50-60-W-L-5 | 48V PoE remote network node, standard Cat-5/RJ45 connection, dim-to-dark; 4 channel with a combined 8-53W, 12-48Vdc output, with Wall Switch Inputs and Outputs. |
| | ND50-60-W-L-5 | 48V PoE remote device node, standard Cat-5/RJ45 connection, dim-to-dark; 4 channel with a combined 8-53W, 12-48Vdc output, with Wall Switch Inputs and Outputs. |
| | NP50-60-C-F-5 | 48V PoE remote network node, standard Cat-5/RJ45 connection, dim-to-dark; 4 channel with a combined 8-53W, 12-48Vdc output, with Accessory and Wall Switch Inputs and Outputs. |
| | ND50-60-C-F-5 | 48V PoE remote device node, standard Cat-5/RJ45 connection, dim-to-dark; 4 channel with a combined 8-53W, 12-48Vdc output, with Accessory and Wall Switch Inputs and Outputs. |
| | NP50-60-W-N-N-EM | 48V PoE remote network emergency node, standard Cat-5/ RJ45 connection, dim-to-dark; 1 channel with a combined 8-53W, 12-48Vdc output. |
| | ND50-60-W-N-N-EM | 48V PoE remote device emergency node, standard Cat-5/ RJ45 connection, dim-to-dark; 1 channel with a combined 8-53W, 12-48Vdc output. |
| | NP50-60-C-F-5-EM | 48V PoE remote network emergency node, standard Cat-5/ RJ45 connection, dim-to-dark; 4 channel with a combined 8-53W, 12-48Vdc output, with Accessory Inputs and Outputs. |
| | ND50-60-C-F-5-EM | 48V PoE remote device emergency node, standard Cat-5/ RJ45 connection, dim-to-dark; 4 channel with a combined 8-53W, 12-48Vdc output, with Accessory Inputs and Outputs. |
| NOTE: A PoE line of fixtures consists of 1 Network Node connected to a PoE Power Injector and up to 4 max Device Nodes (for individual fixture control). The combined output fixtures of the string must be between 8-53W and 12-48Vdc. Multiple nodes on a string does NOT increase wattage availability, as it is still the same wattage limit of 53W per line. | | |
| POWER SOURCE EQUIPMENT | CDB-8P | Eight Fast Ethernet downlink PoE+ ports; two 1-Gigabit Ethernet uplink ports; 280W Power Supply. |
| | CDB-8U | Eight Fast Ethernet downlink UPOE ports; two 1-Gigabit Ethernet uplink ports; 545W Power Supply. |
| | C9300-24P | Stackable 24 10/100/1000 Mbps PoE+ ports; PoE budget of 445W with 715 WAC power supply; supports StackWise-480 and StackPower. |
| | C9300-24U | Stackable 24 10/100/1000 Mbps UPOE ports; PoE budget of 830W with 1100 WAC power supply; supports StackWise-480 and StackPower. |
| | C9300-48P | Stackable 48 10/100/1000 Mbps PoE+ ports; PoE budget of 437W with 715 WAC power supply; supports StackWise-480 and StackPower. |
| | C9300-48U | Stackable 48 10/100/1000 Mbps UPOE ports; PoE budget of 822W with 1100 WAC power supply; supports StackWise-480 and StackPower. |

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POE ARCHITECTURE LAYOUT



Igor System Design



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NODE POWER SUPPLY MAX FIXTURES PER NODE MATRIX (WATTAGES FOR STATIC WHITE)

| | 5W | 7W | 9W | 11W | 13W | 15W | 20W | 26W |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| NP50-60-W-N-N | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |
| ND50-60-W-N-N | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |
| NP50-60-W-L-5 | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |
| ND50-60-W-L-5 | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |
| NP50-60-C-F-5 | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |
| ND50-60-C-F-5 | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |
| NP50-60-W-N-N-EM | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |
| ND50-60-W-N-N-EM | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |
| NP50-60-C-F-5-EM | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |
| ND50-60-C-F-5-EM | 1-9 | 1-7 | 1-5 | 1-4 | 1-3 | 1-3 | 1-2 | 1 |

NOTE: The connecting of multiple fixtures on one node will control all fixtures attached to that node simultaneously. For individual control, each fixture will need its own node per line. Up to 5 nodes (1 network node + 4 device nodes) per 60W output power port.

NODE POWER SUPPLY MAX FIXTURES PER NODE MATRIX (WATTAGES FOR SUNLIKE)

| | 11W | 14W | 22W | 38W |
|------------------|-----|-----|-----|-----|
| NP50-60-W-N-N | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-W-N-N | 1-4 | 1-3 | 1-2 | 1 |
| NP50-60-W-L-5 | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-W-L-5 | 1-4 | 1-3 | 1-2 | 1 |
| NP50-60-C-F-5 | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-C-F-5 | 1-4 | 1-3 | 1-2 | 1 |
| NP50-60-W-N-N-EM | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-W-N-N-EM | 1-4 | 1-3 | 1-2 | 1 |
| NP50-60-C-F-5-EM | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-C-F-5-EM | 1-4 | 1-3 | 1-2 | 1 |

NOTE: The connecting of multiple fixtures on one node will control all fixtures attached to that node simultaneously. For individual control, each fixture will need its own node per line. Up to 5 nodes (1 network node + 4 device nodes) per 60W output power port.

NODE POWER SUPPLY MAX FIXTURES PER NODE MATRIX (WATTAGES FOR LUMINUMS CCT TW)

| | 7W | 11W | 14W | 22W | 28W |
|------------------|-----|-----|-----|-----|-----|
| NP50-60-W-N-N | 1-7 | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-W-N-N | 1-7 | 1-4 | 1-3 | 1-2 | 1 |
| NP50-60-W-L-5 | 1-7 | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-W-L-5 | 1-7 | 1-4 | 1-3 | 1-2 | 1 |
| NP50-60-C-F-5 | 1-7 | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-C-F-5 | 1-7 | 1-4 | 1-3 | 1-2 | 1 |
| NP50-60-W-N-N-EM | 1-7 | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-W-N-N-EM | 1-7 | 1-4 | 1-3 | 1-2 | 1 |
| NP50-60-C-F-5-EM | 1-7 | 1-4 | 1-3 | 1-2 | 1 |
| ND50-60-C-F-5-EM | 1-7 | 1-4 | 1-3 | 1-2 | 1 |

NOTE: The connecting of multiple fixtures on one node will control all fixtures attached to that node simultaneously. For individual control, each fixture will need its own node per line. Up to 5 nodes (1 network node + 4 device nodes) per 60W output power port.

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NODE POWER SUPPLY MAX FIXTURES PER NODE MATRIX (WATTAGES FOR LUMINUMS WARM DIM)

| | 10W | 14W | 23W | 39W |
|------------------|-----|-----|-----|-----|
| NP50-60-W-N-N | 1-5 | 1-3 | 1-2 | 1 |
| ND50-60-W-N-N | 1-5 | 1-3 | 1-2 | 1 |
| NP50-60-W-L-5 | 1-5 | 1-3 | 1-2 | 1 |
| ND50-60-W-L-5 | 1-5 | 1-3 | 1-2 | 1 |
| NP50-60-C-F-5 | 1-5 | 1-3 | 1-2 | 1 |
| ND50-60-C-F-5 | 1-5 | 1-3 | 1-2 | 1 |
| NP50-60-W-N-N-EM | 1-5 | 1-3 | 1-2 | 1 |
| ND50-60-W-N-N-EM | 1-5 | 1-3 | 1-2 | 1 |
| NP50-60-C-F-5-EM | 1-5 | 1-3 | 1-2 | 1 |
| ND50-60-C-F-5-EM | 1-5 | 1-3 | 1-2 | 1 |

NOTE: The connecting of multiple fixtures on one node will control all fixtures attached to that node simultaneously. For individual control, each fixture will need its own node per line. Up to 5 nodes (1 network node + 4 device nodes) per 60W output power port.

NODE POWER SUPPLY MAX FIXTURES PER NODE MATRIX (LUMEN PACKAGE FOR XICATO XTM09)

| | 8W | 11W | 16W | 31W |
|------------------|-----|-----|-----|-----|
| NP50-60-W-N-N | 1-6 | 1-4 | 1-3 | 1 |
| ND50-60-W-N-N | 1-6 | 1-4 | 1-3 | 1 |
| NP50-60-W-L-5 | 1-6 | 1-4 | 1-3 | 1 |
| ND50-60-W-L-5 | 1-6 | 1-4 | 1-3 | 1 |
| NP50-60-C-F-5 | 1-6 | 1-4 | 1-3 | 1 |
| ND50-60-C-F-5 | 1-6 | 1-4 | 1-3 | 1 |
| NP50-60-W-N-N-EM | 1-6 | 1-4 | 1-3 | 1 |
| ND50-60-W-N-N-EM | 1-6 | 1-4 | 1-3 | 1 |
| NP50-60-C-F-5-EM | 1-6 | 1-4 | 1-3 | 1 |
| ND50-60-C-F-5-EM | 1-6 | 1-4 | 1-3 | 1 |

NOTE: The connecting of multiple fixtures on one node will control all fixtures attached to that node simultaneously. For individual control, each fixture will need its own node per line. Up to 5 nodes (1 network node + 4 device nodes) per 60W output power port.

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NODE POWER SUPPLY MAX FIXTURES PER NODE MATRIX (LUMEN PACKAGE FOR XICATO XTM19)

| | 5W | 7W | 10W | 16W | 26W |
|------------------|------|-----|-----|-----|-----|
| NP50-60-W-N-N | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |
| ND50-60-W-N-N | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |
| NP50-60-W-L-5 | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |
| ND50-60-W-L-5 | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |
| NP50-60-C-F-5 | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |
| ND50-60-C-F-5 | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |
| NP50-60-W-N-N-EM | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |
| ND50-60-W-N-N-EM | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |
| NP50-60-C-F-5-EM | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |
| ND50-60-C-F-5-EM | 1-10 | 1-7 | 1-5 | 1-3 | 1-2 |

NOTE: The connecting of multiple fixtures on one node will control all fixtures attached to that node simultaneously. For individual control, each fixture will need its own node per line. Up to 5 nodes (1 network node + 4 device nodes) per 60W output power port.

MAX CABLE DISTANCE WITH NODE(S) AND UPOE SERVER (WATTAGE LOAD VS CABLE TYPE*)

| | 6W | 12W | 18W | 24W | 30W | 36W | 42W | 49W |
|-------------------------|------|------|------|------|------|------|------|------|
| CAT-5E - COPPER | 328' | 328' | 280' | 215' | 175' | 145' | 125' | 105' |
| CAT-6 - COPPER | 328' | 328' | 328' | 275' | 220' | 185' | 155' | 135' |
| CAT-7 - COPPER | 328' | 328' | 328' | 275' | 220' | 185' | 155' | 135' |
| CAT-5E - LOW COST CU/AL | 328' | 275' | 180' | 140' | 110' | 90' | 80' | 70' |

NOTE: Cable distance allowed between the connection of the first network node and device(s) nodes will not exceed a max distance of 100'. Max cable distance values provided above includes the 100' limit between the node connection.

- **For example:** if max cable distance is >100' (6W with CAT5e cable, max is 328') then the max distance from the power server to the first network node allowed is 228', and then the connection between the first network node and the device node(s) have a max distance of 100'.
- **If max cable distance is <100' (ex: 42W with CAT5e low cost cable, max is 80')** then the overall max distance from the power server to the LAST node on the line allowed is 80'. The max cable distance is determined with a max 3% wattage loss per 60W line. Any other wattage output different from the UPOE power source will have different max cable values. Contact factory for custom load calculation.

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POE WIRING EXAMPLE

