Programming for DirectLOGIC PLCs

Programming versions

With DirectSOFT6 Programming Software, selecting which software package you need is a snap! You can select the fully loaded package at its great low price, or you may choose the FREE package. It has all of the same programming functions as the full package. However, it will only download a program up to 100 words long

The fully-loaded version (PC-DSOFT6) will program all of our *Direct*LOGIC PLCs, some GE Series One Plus PLCs, and TI305/405 SIMATIC PLCs. Refer to the chart below to verify compatibility.

The FREE *DirectSOFT6* package (PC-DS100) was designed to provide a more streamlined choice. You can see from the table below that the FREE version has the same support and same great features, but will only allow you to open or download a program up to 100 words long.

Also, you cannot open an offline project larger than 100 words. You can create a project as large as you want and save it to disk, but you cannot reopen or download it to a PLC without purchasing the full version (PC-DSOFT6).

PLC compatibility

If you're using our *Direct*LOGIC products, then compatibility is not an issue. The *Direct*SOFT6 package supports all *Direct*LOGIC CPUs. Our software also supports many compatible products that were offered by previous vendors of the JTEKT-designed PLCs. If you're buying the software to program a compatible CPU, check the following table to make sure your CPU is supported. (Sorry, but if your CPU is not shown, then it is not supported.)

| Family | СРИ | DirectSOFT6 (full version) PC-DSOFT6 | DirectSOFT6 (free version) PC-DS100* | CPU Firmware Version Needed to Use IBox Instructions |
|--|-----------------------------------|--|--|--|
| DL05 | All | ✓ | ✓ | ✓ CPU v5.10 or Later |
| DL06 | All | ✓ | ✓ | ✓ CPU v2.10 or Later |
| DL105 (retired) | All | ✓ | ✓ | |
| , , | D2-230 (retired) | ✓ | ✓ | |
| | D2-240 (retired) | ✓ | ✓ | |
| DI 005 | D2-250 (retired) | ✓ | ✓ | |
| DL205 | D2-250-1 (retired) | ✓ | ✓ | ✓ CPU v4.60 or Later |
| | D2-260 (retired) | ✓ | ✓ | ✓ CPU v2.40 or Later |
| | D2-262 | ✓ | ✓ | |
| DL305 (retired) | D3-340 | ✓ | ✓ | |
| | D3-350 | ✓ | ✓ | |
| | D4-430 (retired) | ✓ | ✓ | |
| | D4-440 (retired) | √ | ✓ | |
| DL405 | D4-450 (retired) | √ | ✓ | ✓ CPU v3.30 or Later |
| | D4-454 | √ | ✓ | 01 0 10.00 01 20.01 |
| - @ - | IC610CPU105** | √ | ✓ | |
| GE [®] Series 1 PLUS | IC610CPU106** | ✓ | ✓ | |
| | 325-07**, PPX:325-07** | √ | ✓ | |
| a | 330-37**, PPX:330-37** | ✓ | √ | |
| TI305™/ SIMATIC [®] TI305™ | 325S-07** (or 325 with Stage Kit) | ✓ | ✓ | |
| 11305'''' | 330S-37**, PPX:330S-37** | √ | ✓ | |
| | 335-37, PPX:335-37 | ✓ | ✓ | |
| TI405™/ SIMATIC® TI405™ | 425-CPU, PPX:425-CPU | ✓ | √ | |
| | PPX:430-CPU | √ | ✓ | |
| | 435-CPU, PPX:435-CPU | √ | ✓ | |
| Kostac S-Series | PZ1 | √ | ✓ | |
| | PZ2 | √ | ✓ | |
| | PZ3 | ✓ | ✓ | |
| | SC-4X | √ | ✓ | |
| | SG-8/8B | ✓ | ✓ | |
| | SL-4 | ✓ | √ | |
| | SU-5/5E/5M | · ✓ | | |
| | SU-6/6B/6H/6M | · / | | |
| | SZ-3 | · / | | |
| | SZ-4/4M | · · | | |
| | TJ-435/435-AS | · · | <u> </u> | |

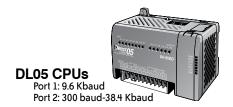
^{*} PC-DS100 is only available by download from our Website. This FREE, full-featured software package will download a program limited to 100 words.

▼AUTOMATIONDIRECT®

^{**} Requires Data Communications Unit (D3-232-DCU (retired)).

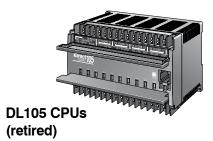
Programming for *Direct*LOGIC PLCs

Connecting to DirectLOGIC PLCs

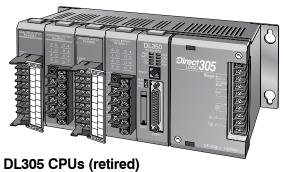








Port 1: 9.6 Kbaud



D3-340: Port 1/2: 300 baud - 38.4 Kbaud D3-350: Port 1: 9.6 Kbaud Port 2: 300 baud - 38.4 Kbaud



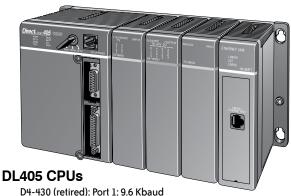
Port 2: 300 baud - 19.2 Kbaud

D2-250-1 (retired): Port 1: 9.6 Kbaud

DL06 CPUs Port 1: 9.6 Kbaud

D2-260 (retired): Port 2: 300 baud - 38.4 Kbaud

D2-262: Port 2: 300 baud - 38.4 Kbaud



D4-440 (retired): Port 2: 300 baud - 19.2 Kbaud

D4-450 (retired): Port 0: 9.6 Kbaud

Port 1/3: 300 baud - 38.4 Kbaud

Port 2: 300 baud - 38.4 Kbaud

D4-454: Port 0: 9.6 Kbaud

Port 1/3: 2.4 Kbaud - 38.4 Kbaud Port 2: 2.4 Kbaud - 38.4 Kbaud

Or use an Hx-ECOM100 module in the DL05, DL06, DL205 (except D2-230) or DL405 local base to program over a high-speed Ethernet link.

DirectLOGIC PLC Programming Cables

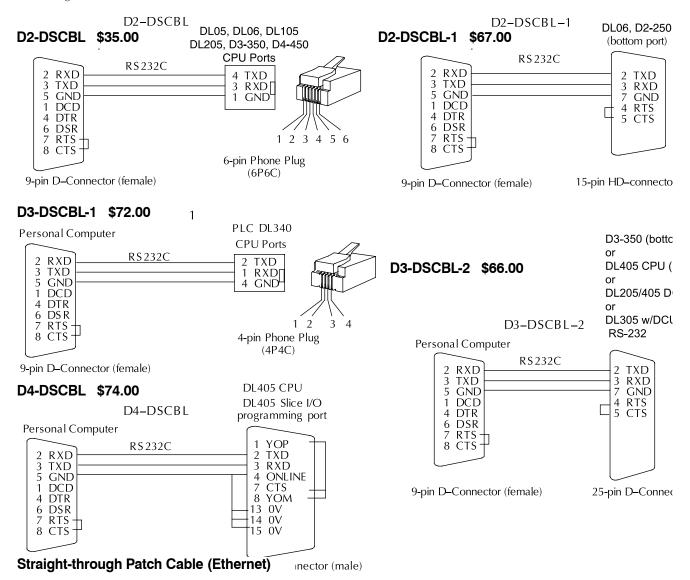
Since CPUs provide many different communication port possibilities, it is helpful to know exactly which communications cable is required. Use the table below to choose the proper cable:

| Family | CPU (or other device) | Port | Cable |
|---|--|----------------------|--|
| | | Port 1 | D2-DSCBL (EA-MG-PGM-CBL optional |
| | All versions | Port 2 | D2-DSCBL (EA-MG-PGM-CBL optional |
| DirectLOGIC DL05 | H0-ECOM / ECOM100 (modules) | Only one | ** |
| | | Port 1 | D2-DSCBL (EA-MG-PGM-CBL optional |
| | D0-DCM (module) | Port 2 | D2-DSCBL-1 |
| | | Port 1 | D2-DSCBL (EA-MG-PGM-CBL optional |
| | All versions | Port 2 | D2-DSCBL-1 |
| DirectLOGIC DL06 | H0-ECOM / ECOM100 (modules) | Only one | ** |
| 5.11001200110 5200 | | Port 1 | D2-DSCBL (EA-MG-PGM-CBL optional |
| | D0-DCM (module) | Port 2 | D2-DSCBL-1 |
| DirectLOGIC DL105 | F1-130 (all versions) | | |
| (retired) | , , | Only one | D2-DSCBL (EA-MG-PGM-CBL optiona |
| | D2-230 | Only one | D2-DSCBL (EA-MG-PGM-CBL optiona |
| | D2-240 | Top port | D2-DSCBL (EA-MG-PGM-CBL optiona |
| | 52 2.10 | Bottom port | D2-DSCBL (EA-MG-PGM-CBL optiona |
| | D2-250(-1) | Top port | D2-DSCBL (EA-MG-PGM-CBL optiona |
| | (D2-250-1 CPU is retired) | Bottom port | D2-DSCBL-1 |
| DirectLOGIC DL205 | D2-260 | Top port | D2-DSCBL (EA-MG-PGM-CBL optional |
| | DZ-200 | Bottom port | D2-DSCBL-1 |
| | D2-262 | Top port | D2-DSCBL (EA-MG-PGM-CBL optiona |
| | DZ-202 | Bottom port | D2-DSCBL-1 |
| | D2-DCM (module) | Only one | D3-DSCBL-2 |
| | H2-ECOM (-F) / ECOM100 | Only one | ** |
| | D3-340 | Top port | D3-DSCBL-1 |
| Dirocti OCIC DI 205 | | Bottom port | D3-DSCBL-1 |
| DirectLOGIC DL305 (retired) | D3-350 | Top port | D2-DSCBL (EA-MG-PGM-CBL optiona |
| rourouj | | Bottom port | D3-DSCBL-2 |
| | D3-DCM (module) | Only one | D3-DSCBL-2 |
| | D4-430/D4-440 (retired) | Top port (15-pin) | D4-DSCBL |
| | D 1 100/D 1 110 (10tillou) | Bottom port (25-pin) | D3-DSCBL-2 |
| | | Phone jack | D2-DSCBL (EA-MG-PGM-CBL optiona |
| | D4-450 (retired) | Top port (15-pin) | D4-DSCBL |
| | | Bottom port (25-pin) | D3-DSCBL-2 |
| DirectLOGIC DL405 | | Phone jack | D2-DSCBL (EA-MG-PGM-CBL optional |
| | D4-454 | Top port (15-pin) | D4-DSCBL |
| | | Bottom port (25-pin) | D3-DSCBL-2 |
| | D4-DCM (module) | Only one | D3-DSCBL-2 |
| | H4-ECOM (-F) / ECOM100 | Only one | ** |
| | Slice I/O (module) | Only one | D4-DSCBL |
| GE® Series 1 | IC610CPU105/106 | Requires DCU* | D3-DSCBL-2 |
| | 325-07, PPX:325-07 | Requires DCU* | D3-DSCBL-2 |
| | 330-37, PPX:330-37 | Requires DCU* | D3-DSCBL-2 |
| TI305 [™] /SIMATIC® TI305 [™] | 325S-07 (or 325 with stage kit) | Requires DCU* | D3-DSCBL-2 |
| OUST /SIIVIATIC TISUS | 330S-37, PPX:330S-37 | Requires DCU* | D3-DSCBL-2 |
| | , | Phone jack | D3-DSCBL-1 |
| | 335-37, PPX:335-37 | If DCU is used* | D3-DSCBL-2 |
| | 425-CPU, PPX:425-CPU | 15-pin port | D4-DSCBL |
| | | Top port (15-pin) | D4-DSCBL |
| | | | The state of the s |
| TM | N/A, PPX:430-CPU | | D3-DSCBL-2 |
| TI405 [™] /SIMATIC [®] TI405 [™] | , , | Bottom port (25-pin) | D3-DSCBL-2 D4-DSCBL |
| TI405 [™] /SIMATIC® TI405 [™] | N/A, PPX:430-CPU 435-CPU, PPX:435-CPU | | D3-DSCBL-2 D4-DSCBL D3-DSCBL-2 |

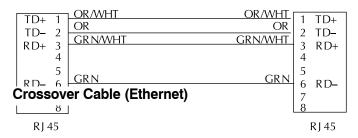
^{*} Requires RS232 Data Communications Unit (D3-232-DCU (retired)).
**Requires standard Ethernet twisted pair cable (HX-ECOM) or standard fiber optic cable (HX-ECOM-F).
***The GoldX USB-RS232 adapter is another option for USB communication.

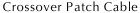
DirectLOGIC PLC Programming Cables

Pin labeling conforms to IBM DTE and DCE standards

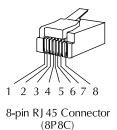


Straight-through Patch Cable





| | OR /M/HT | | GRN/WHT. | | |
|-------|----------|------------------|----------|------|---|
| TD+ 1 | OP. | | GRN | TD+ | 1 |
| TD- 2 | CRNAAAT | $\neg \sim \sim$ | OP AM/HT | TD- | 2 |
| RD+ 3 | GKIWWHI | | OK/WITI | R D+ | 3 |
| 1 4 | | \sim | | ı KD | 4 |
| ; | | | | ı | Ė |



All Ethernet and ECOM patch cables should be Catego UTP Cable. The diagram illustrates the appropriate wire position in the RJ 45 connector.