

Yocto quick reference card

Introduction	
Get Yocto sources	\$ git clone -b <branch> git://git.yoctoproject.org/poky
Create and test a minimal image	\$ cd poky \$ source oe-init-build-env <target>-build \$ bitbake core-image-minimal \$ runqemu qemux86
Layers	
Layer structure	meta-<layer-name> ├── conf │ └── layer.conf ├── recipes-core │ └── recipe_1 │ └── recipe_1.bb └── recipes-*
Add layer to build environment	\$ cd <target>-build \$ bitbake-layers add-layer <layer-path>
Remove layer from build environment	\$ cd <target>-build \$ bitbake-layers remove-layer <layer-name>
List layers for build environment	\$ cd <target>-build \$ bitbake-layers show-layers
Create a new layer	\$ cd <layer-dir-path> \$ bitbake-layers create-layer <layer-name>
Building recipes	
Build binary package from recipe	\$ bitbake <recipe-name>
Remove binary package	\$ bitbake -c cleansstate <recipe-name>
Remove binary package AND sources	\$ bitbake -c cleanall <recipe-name>
Get sources for recipe	\$ bitbake -c fetchall <recipe-name>
List available recipes (.bb)	\$ bitbake-layers show-recipes
List appended recipes (.bbappend)	\$ bitbake-layers show-appends
Produce package index for package management	\$ bitbake package-index
Build default Linux kernel recipe	\$ bitbake virtual/kernel
Configure default Linux kernel recipe	\$ bitbake -c menuconfig virtual/kernel
Create a <i>fragment</i> from modified configuration	\$ bitbake -c diffconfig virtual/kernel
Build SDK for <image-name>	\$ bitbake -c populate_sdk <image-name>
Options (local.conf)	

Set target to <machine-name>	MACHINE = "<machine-name>"
Reduce tmp/work size	INHERIT += "rm_work"
Add <value> Kb to image	IMAGE_ROOTFS_EXTRA_SPACE = "<value>"
Use IPK format instead of RPM for package management	PACKAGE_CLASSES = "package_ipk"
Add recipes to image	IMAGE_INSTALL_append = " recipe_1 recipe_2 ..."
Add / remove features to distribution	DISTRO_FEATURES_append[remove] = " feature_1 feature_2 ..."
Force provider for a recipe	PREFERRED_PROVIDER_<recipe-name> = "recipe"
Force version for a recipe	PREFERRED_VERSION_<recipe-name> = "version"
Recipes syntax (BitBake)	
Inherit a class	inherit <class-name>
Add a local component to recipe	SRC_URI += " file:// <name> http:// <address>;name=<name> git:// <address>;name=<name>"
Add MD5/SHA256 checksum	SRC_URI[<name>.md5sum] = "value" SRC_URI[<name>.sha256sum] = "value"
Add recipes to image	IMAGE_INSTALL += "recipe_1 recipe_2 ..."
Add features to image	IMAGE_FEATURES += "feature_1 feature_2 ..."
Add (static) dependencies	DEPENDS += "recipe_1 recipe_2 ..."
Add (runtime) dependencies	RDEPENDS_\${PN} += "recipe_1 recipe_2 ..."
Set value if not already set (softer assigment)	VARIABLE ?= "value"
Set value if not already set (weaker assigment)	VARIABLE ??= "value"
OPKG (IPK)	
Add a package directory to /etc/opkg/opkg.conf	src/gz <pkg-dir> <server-url>/<pkg-dir>
Install a package	# opkg install <package>
Remove a package	# opkg remove <package>
List package files	# opkg files
Update package list	# opkg update
Upgrade packages	# opkg upgrade
List installed packages	# opkg list-installed